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Bot.
J.O.S.

BIOLOGIA
CENTRALI-AMERICANA;

OR,

CONTRIBUTIONS TO THE KNOWLEDGE
OF THE
FAUNA AND FLORA
OF
MEXICO AND CENTRAL AMERICA.

EDITED BY

F. DUCANE GODMAN AND OSBERT SALVIN.

BOTANY.

VOL. V.

BY

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AUTHOR OF THE "BOTANY OF THE 'CHALLENGER' EXPEDITION," &c.

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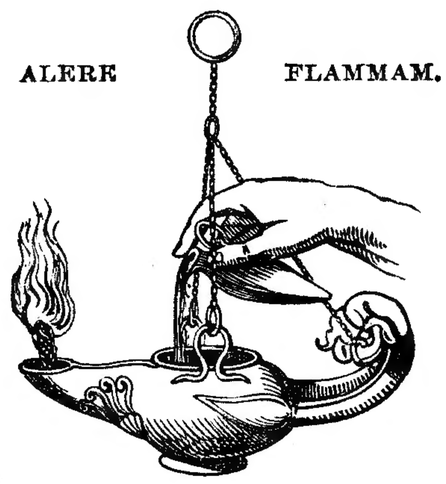

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† *Vaccinium brachystachyum* on the Plate.

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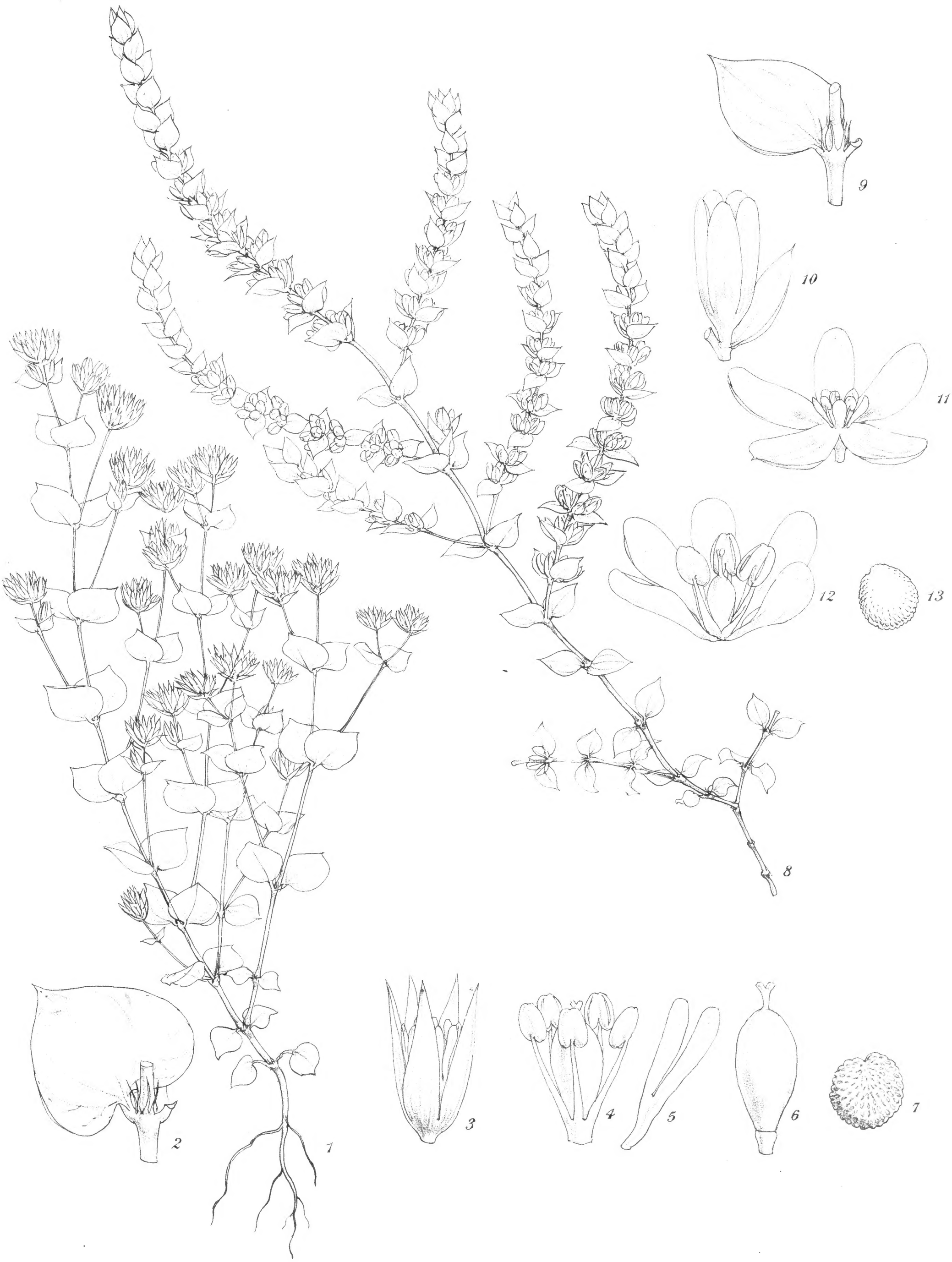
* *Phœospherion leiocarpum* on the Plate.

THELYPODIUM PETIOLATUM, *Hemsl.*

W.H.Fitch lith. Hanhart imp.
56

COCHLOSPERMUM HIBISCOIDES, *H.B.K.*

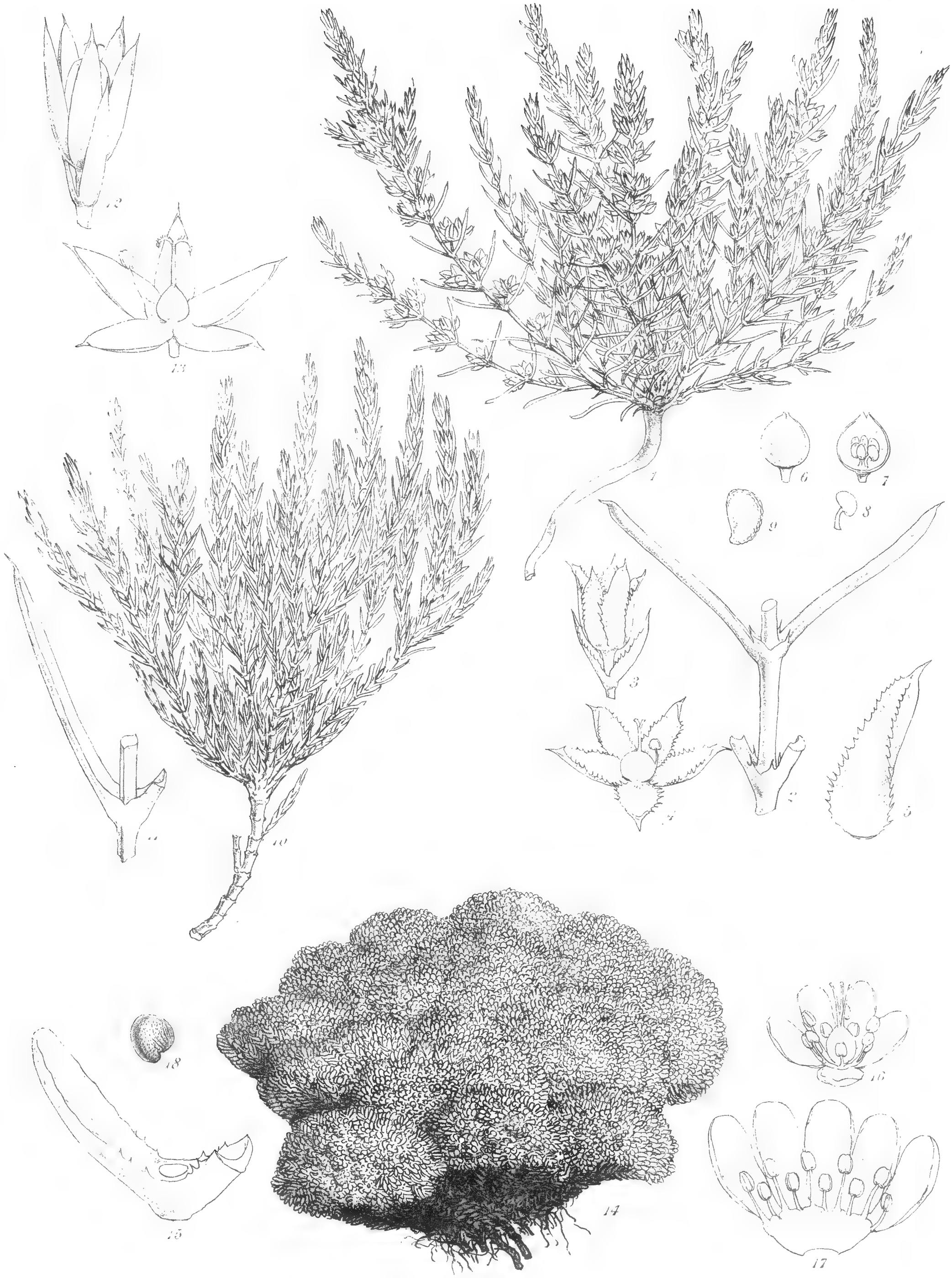
C.O.Salvin del. Fitch lith. Hanhart imp.
99



1_7 DRYMARIA LEPTOCLADOS, *Hemsl.*
8_13 „ XEROPHYLLA, *A. Gray.*

W.H.Fitch lith.

Hanhart imp.
76



19 CERESIA CONGESTIFLORA *Scrd.* 10 ARENARIA GLAUCA *Arms.*
14 13 ARENARIA BRYOIDES. *Willd.*, *var.* GUATEMALENSIS *Hemsl.*

TOVOMITA STYLOSA, *Hemsl.*

W.H.Fitch lith.

Hanhart imp.
59

1_6 MARCGRAVIA NEPENTHOIDES, *Seem*
7_12 " AFFINIS, *Hemsl.*

SAURAUJA PAUCISERRATA *Hemsl*

W.H Fitch del et lith

M&N Hanhart imp.
102

PELLICIERA RHIZOPHORÆ, *Pl. et Tr.*

W.H.Fitch Lith. Hanhart imp.

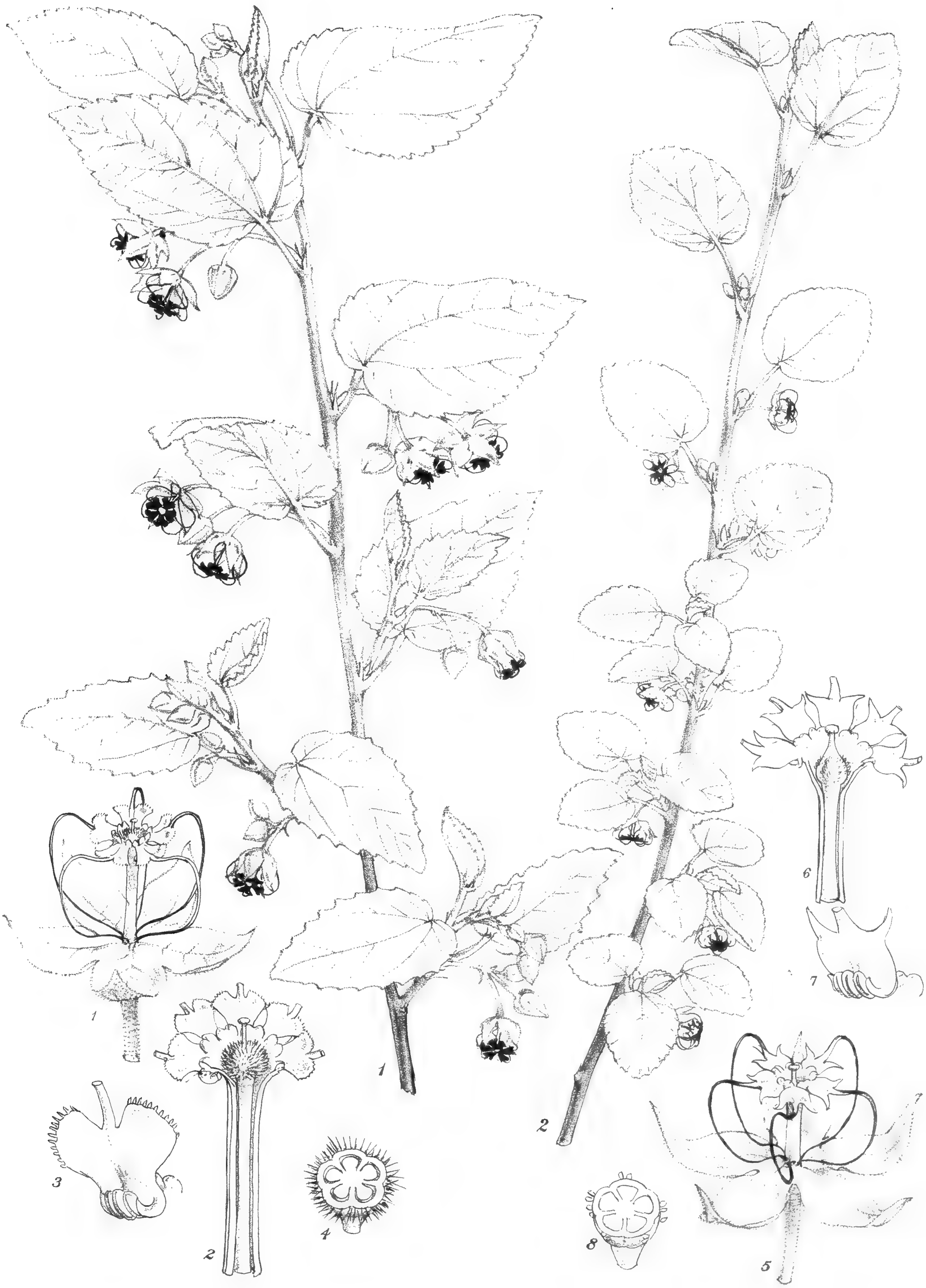
SIDA LINDENIANA. *Turcz*

W.H.Fitch del. et lith. Hanhart imp

QUARARIBEA PTEROCALYX, *Hemsl.*

W.H.Fitch lith.

Hanhart imp
64



1 AYENIA OVATA, *Hemsl.*
2 „ ROTUNDIFOLIA, *Hemsl.*

W.H.Fitch lith

Hanhart imp.
60

ERYTHROCHITON LINDENI. *Hemsl*

W.H.Fitch lith.

Hanhart imp
46

DECATROPIS COULTERI. *Hook. fil.*

W.H.Fitch. lith.

Hanhart imp.
80

SCHŒPFIA VACCINIIFLORA. *Planch.*

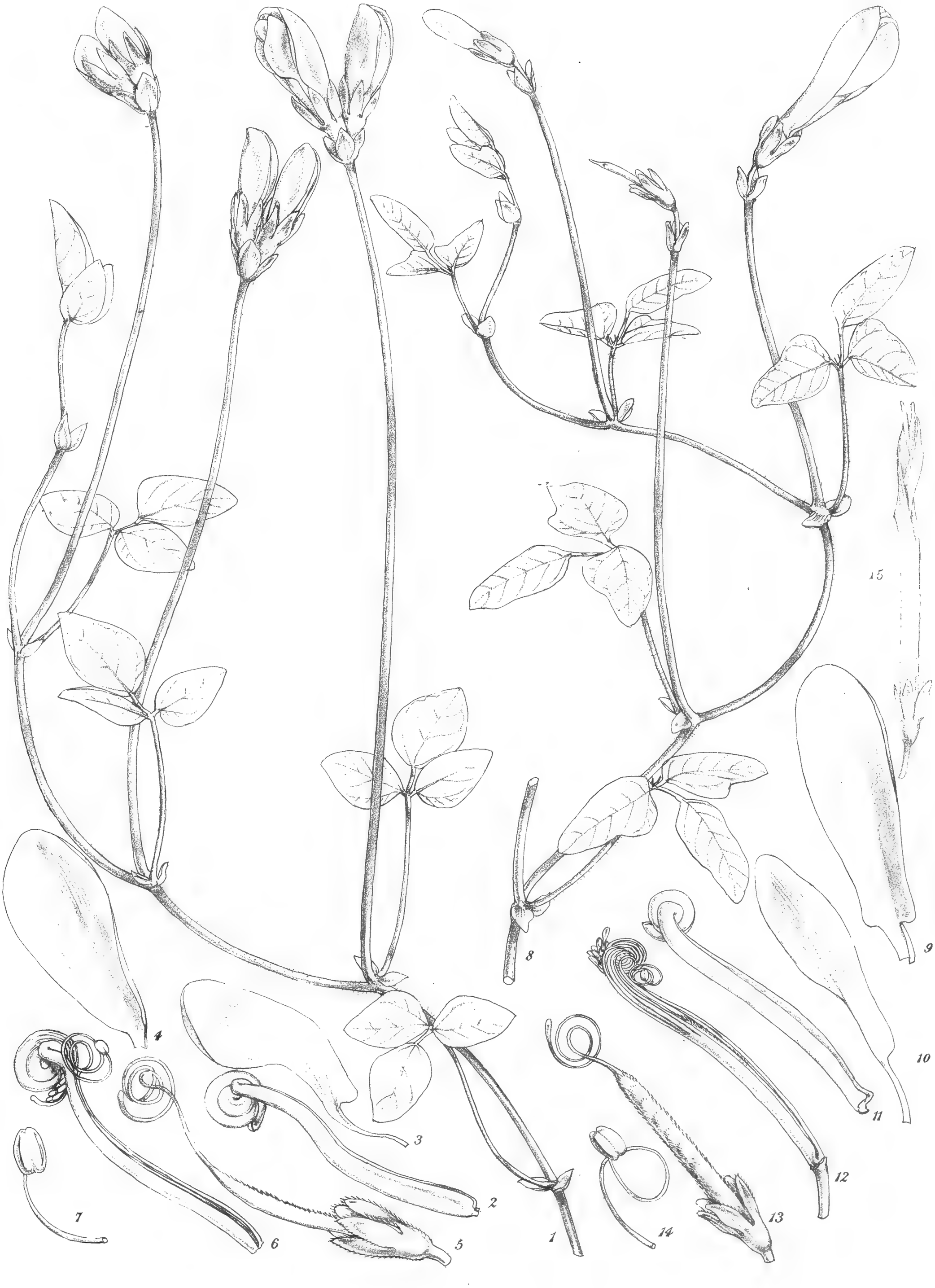
W.H.Fitch lith.

Hanhart imp
81

DALEA INSIGNIS, *Hemsl.*

W.H.Fitch lith.

Hanhart imp
82



1_7 MINKELERSIA BIFLORA, *Hemsl.*
8_15 „ GALACTIOIDES, *Mart. et Gal.*

W.H.Fitch del. et lith.

Hanhart imp.
163

PTEROCARPUS HAYESII, *Hemsl.*

W.H.Fitch lith. Hanhart imp.

DEUTZIA MEXICANA, *Hemsl.*

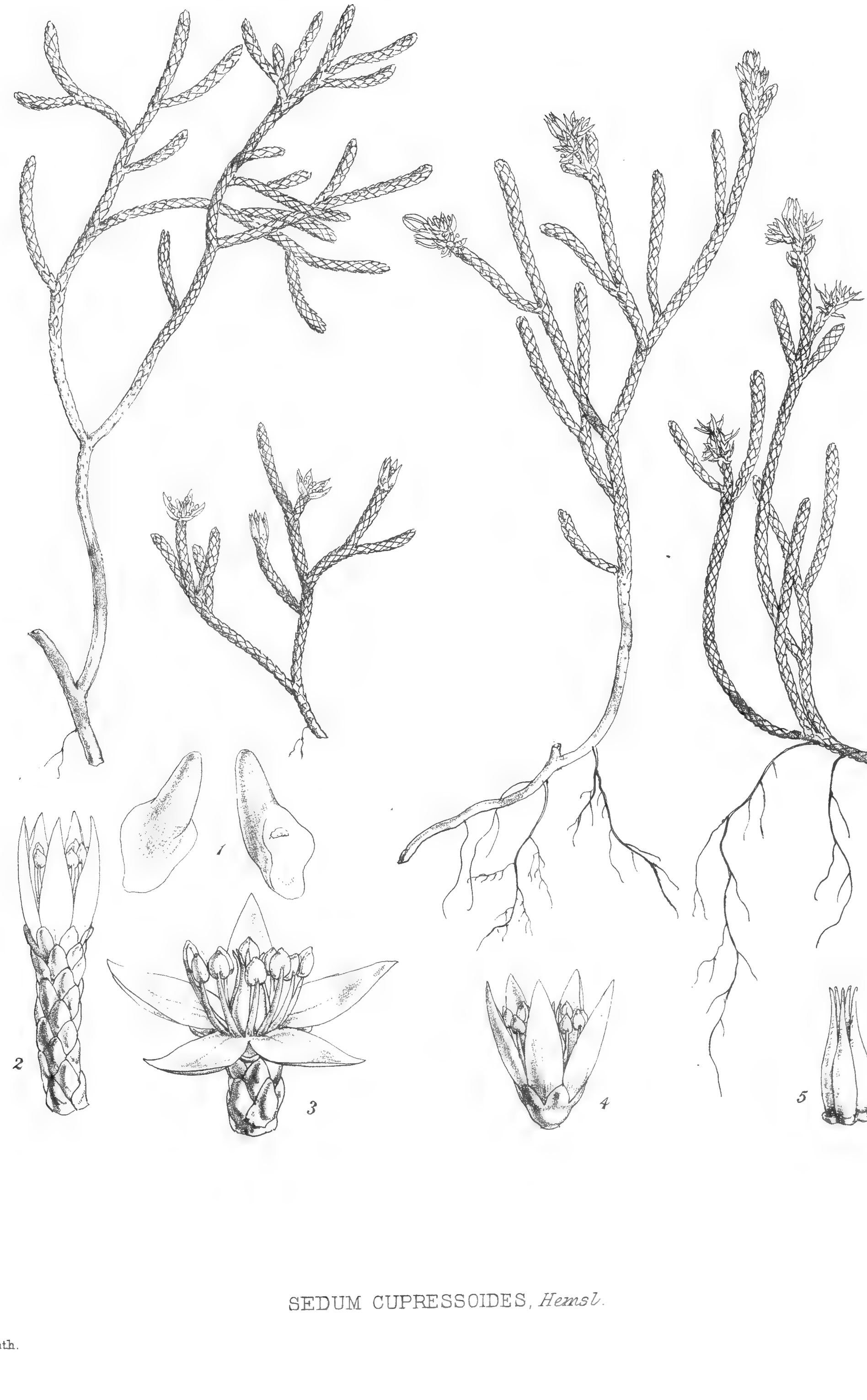
W.H.Fitch lith. Hanhart imp.

COTYLEDON BATESII, *Hemsl.*

SEDUM BOURGÆI, *Hemsl.*

W. H. Fitch del. et lith.

Hanhart imp
103



SEDUM CUPRESSOIDES, *Hemsl.*

W.H.Fitch lith. Hanhart imp.

GUSTAVIA SUPERBA, *Berg. var.* SALVINIÆ, *Hemsl.*

C.O.Salvin del. Fitch lith

Hanhart imp
100

BLAKEA GRACILIS, *Hemsl.*

W.H. Fitch lith. Hanhart imp. 83

CUPHEA ANISOPHYLLA, *Hemsl.*

1–5. CUPHEA BUSTAMANTA, *La Llav et Lex*
6–10. „ GRACILIFLORA *Kœhne*

W H Fitch lith

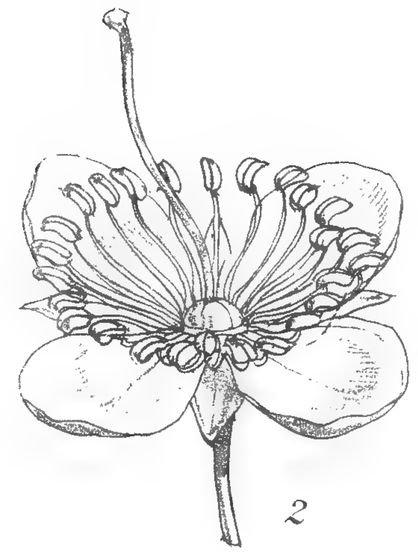
M&N Hanhart imp
212

CUPHEA DODECANDRA, *Hemsl.*

W.H.Fitch lith.

Hanhart imp
210

2



3

4

ANTHERYLLIUM NUDIFLORUM, *Hemsl.*

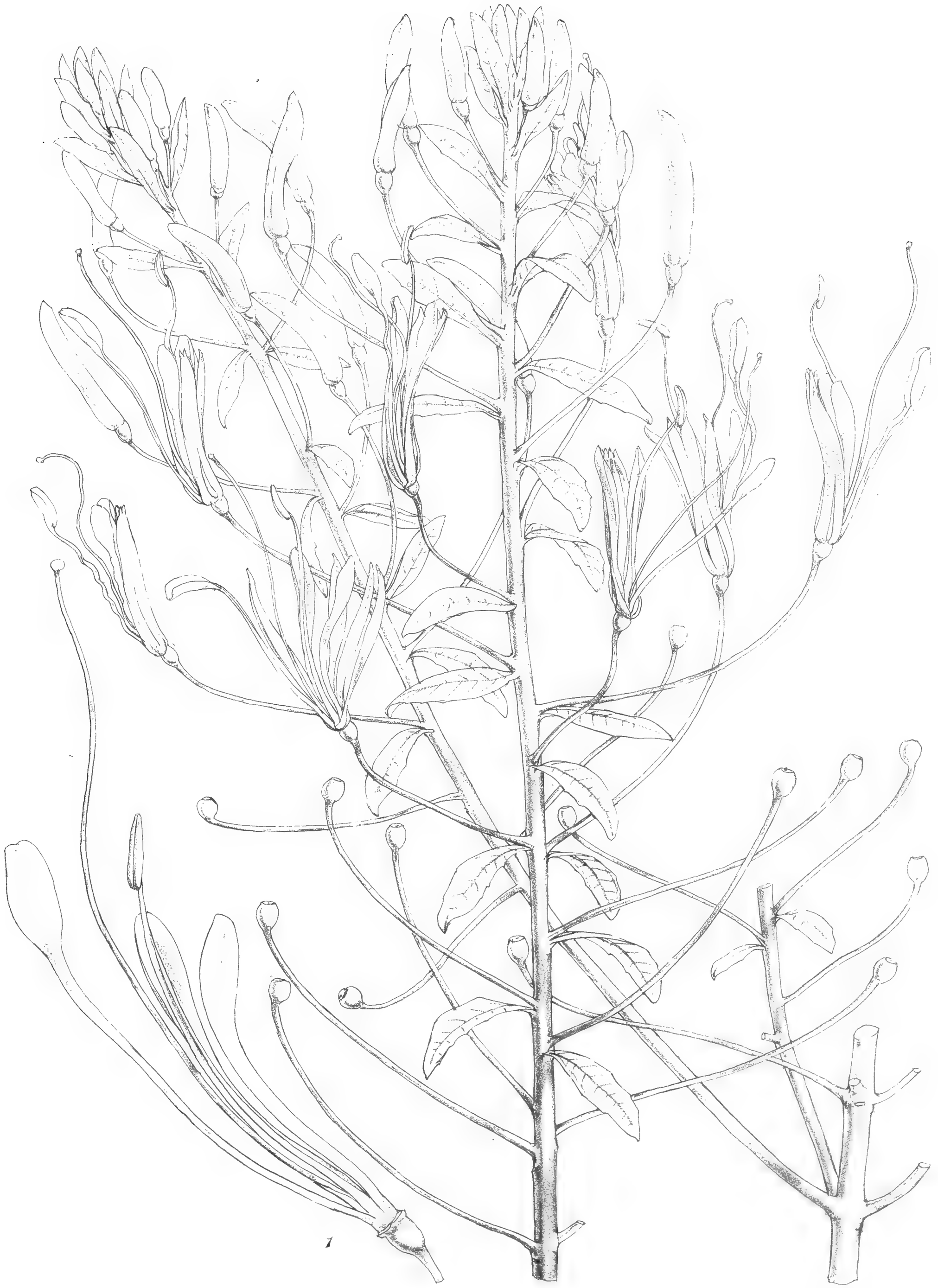
Hanhart imp

Wil. Stock. lith

1. FUCHSIA MINIMIFLORA, *Hemsl.*
2. F. MIXTA, *Hemsl.* 3. F. MINUTIFLORA, *Hemsl*

W H. Fitch del. et lith. Hanhart. imp 104

1 HAUYA ELEGANS, *Moç. et Sess.*
2 H. BARCENÆ, *Hemsl.* 3 H. CORNUTA, *Hemsl.*



LOPEZIA INSIGNIS, *Hemsl.*

W.H.Fitch lith. Hanhart imp.

MICROSECHIUM GUATEMALENSE, *Hemsl.*

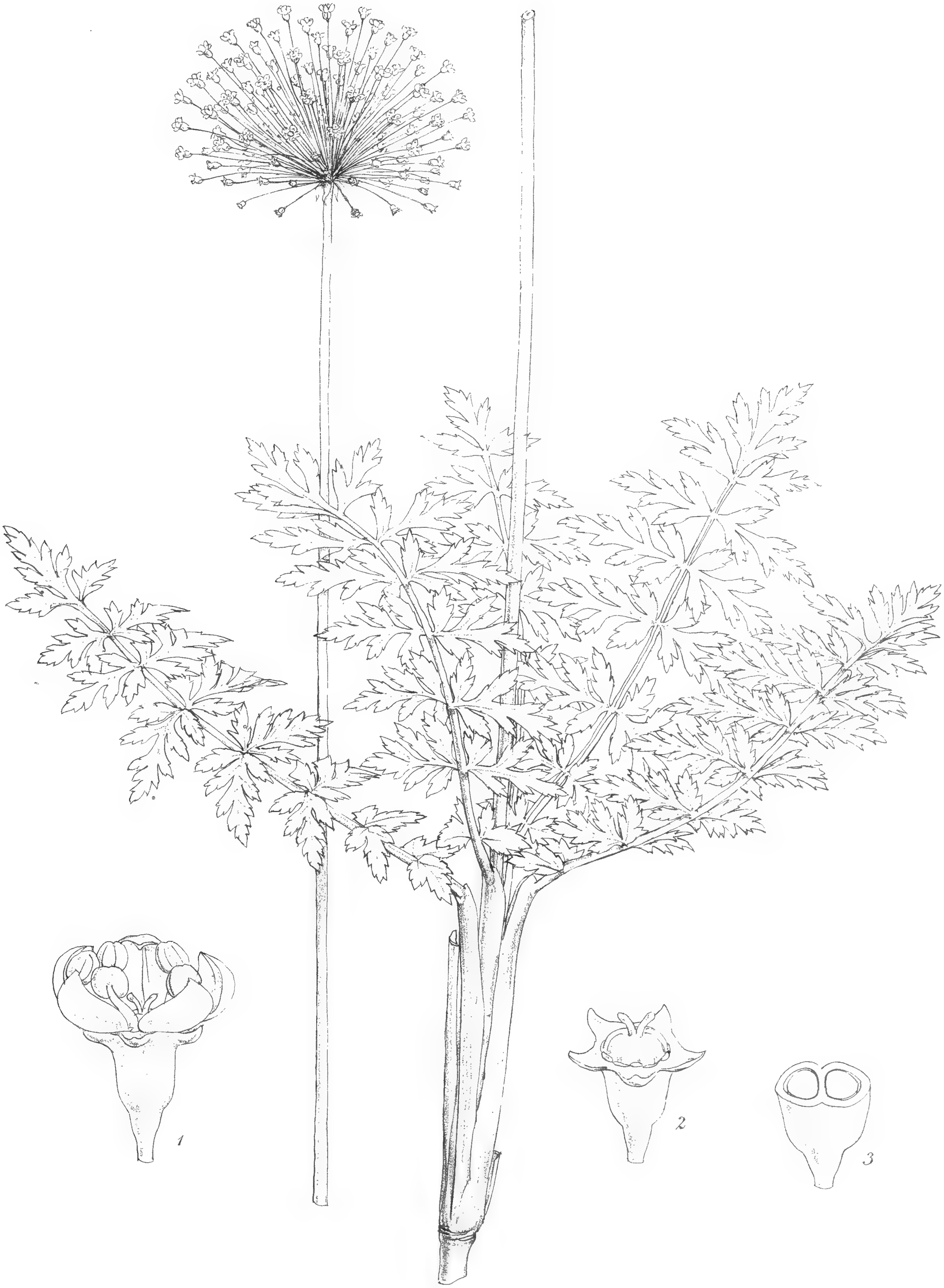
W.H.Fitch lith.

Hanhart imp
86

ASTERISCIUM FLEXUOSUM, *Hemsl*

W.H.Fitch lith.

Hanhart imp
66



OREOMYRRHIS(?) GRACILIPES, *Hemsl.*

WH.Fitch lith.

Hanhart imp
85

♀ 1 5 OREOMYRRHIS(?) PLANIPETALA. *Hemsl.*
♂ 6–8 (?) GRACILIPES. *Hemsl.*

W.H.Fitch del. et lith.

Hanhart imp
84

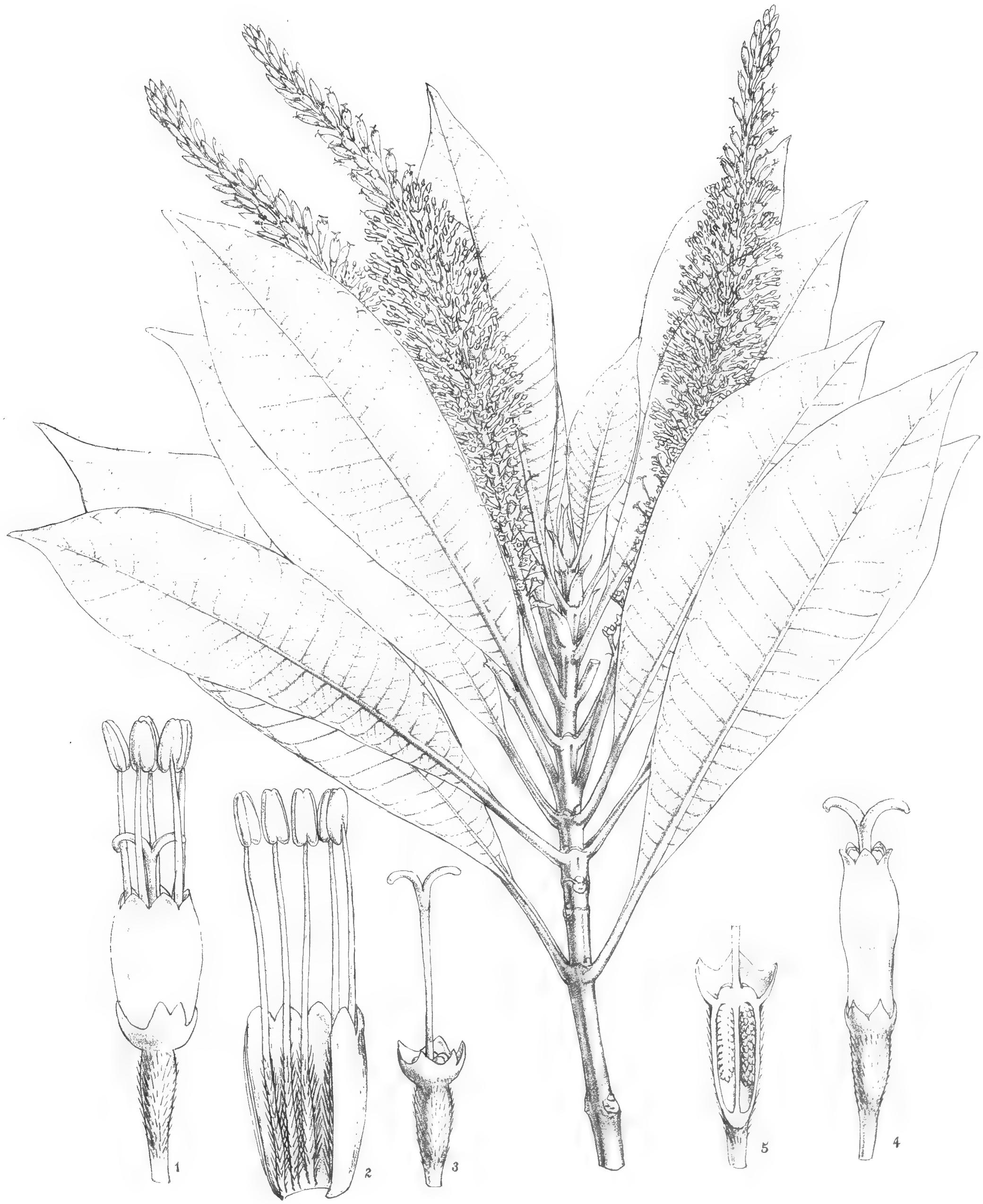
OREOPANAX SALVINII, *Hemsl.*

1_5 ABELIA CORIACEA, *Hemsl.*
6_14 PLACOCARPA MEXICANA, *Hook.fil.*

W.H.Fitch lith.

Hanhart imp.
223

Biol. Centr. Am



ALSEIS BLACKIANA, *Hemsl.*

W.H.Fitch lith.

Hanhart imp.

1_6 DEPPEA UMBELLATA, *Hemsl.*
7_10 " FLORIBUNDA, *Hemsl.*

W.H.Fitch del.et lith.

Hanhart imp
160

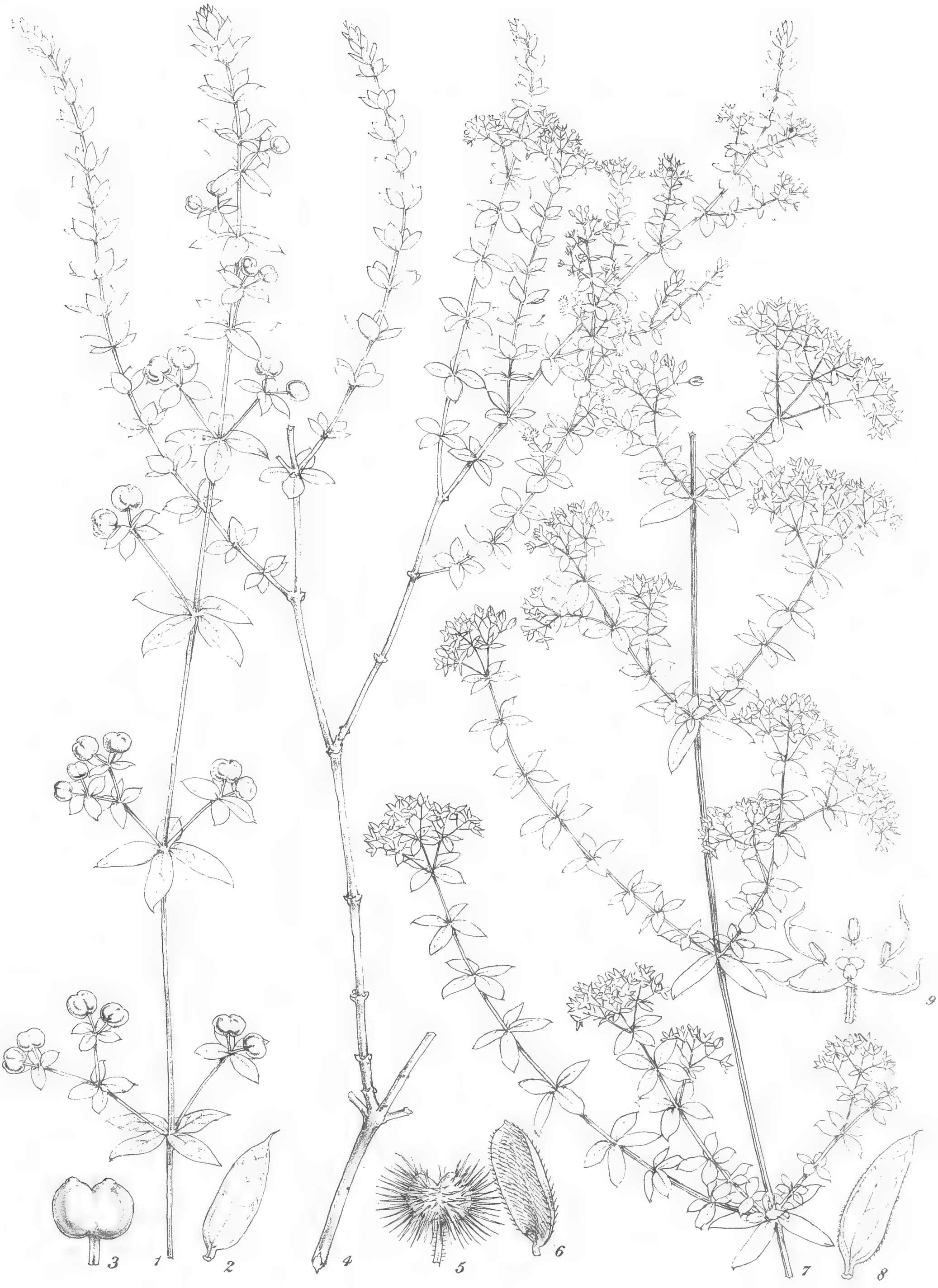
HOFFMANNIA CAULIFLORA *Hemsl.*

WHFitch del et lith. Hanhart imp 159

1_9 CHIONOLÆNA CORYMBOSA. *Hemsl.*
10_15 DIODIA TETRACOCCA, *Hemsl.*

W.H.Fitch del.et lith.

Hanhart imp
161



1_3 GALIUM GEMINIFLORUM, *Mart. et Gal.*
4_6 „ LEUCOTRICHUM, *Hemsl.*
7_9 „ UROPETALUM, *Hemsl.*

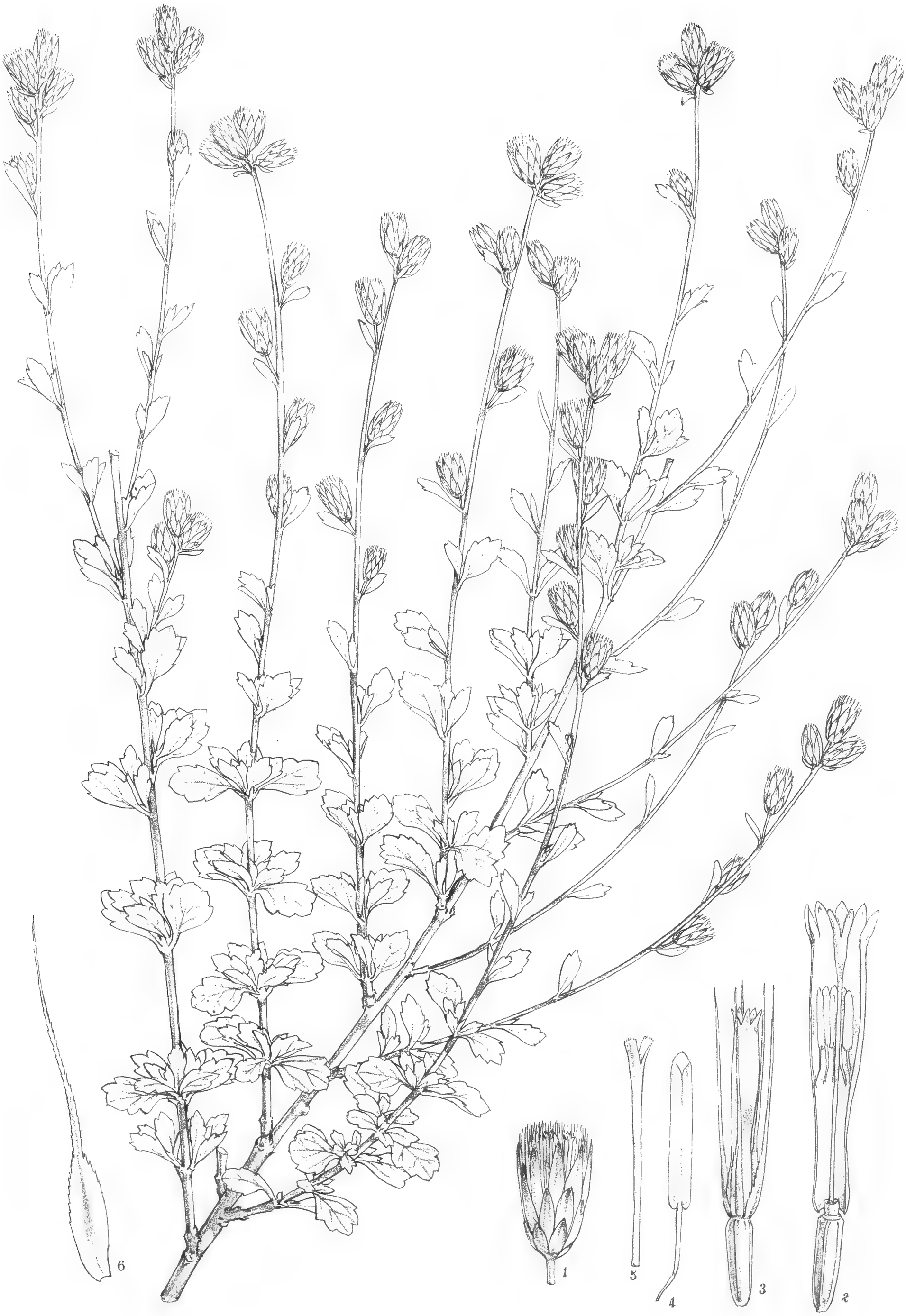
W.H.Fitch lith.

Hanhart imp.
321

VERNONIA SALVINIÆ, *Hemsl.*

M^s C. Salvin del Fitch lith.

Hanhart imp
265.



DECACHÆTA SEEMANNI, *Benth. et Hook. Fil.*

W.H.Fitch lith

Hanhart imp.

1. 5. AGERATUM MICROCEPHALUM, *Hemsl.*
6. 13. EUTETRAS PALMERI, *A. Gr.*

W.H.Fitch lith.

Hanhart imp
222

1-4 LAGASCEA DECIPIENS, *Hemsl.*
5-10 BIFLORA, *Hemsl.*

DESMANTHODIUM GUATEMALENSE, *Hemsl.*

ZALUZANIA COULTERI, *Hemsl*

W.H.Fitch lith

Hanhart imp.
148

MIRASOLIA DIVERSIFOLIA, *Hemsl.*

W.H.Fitch lith.

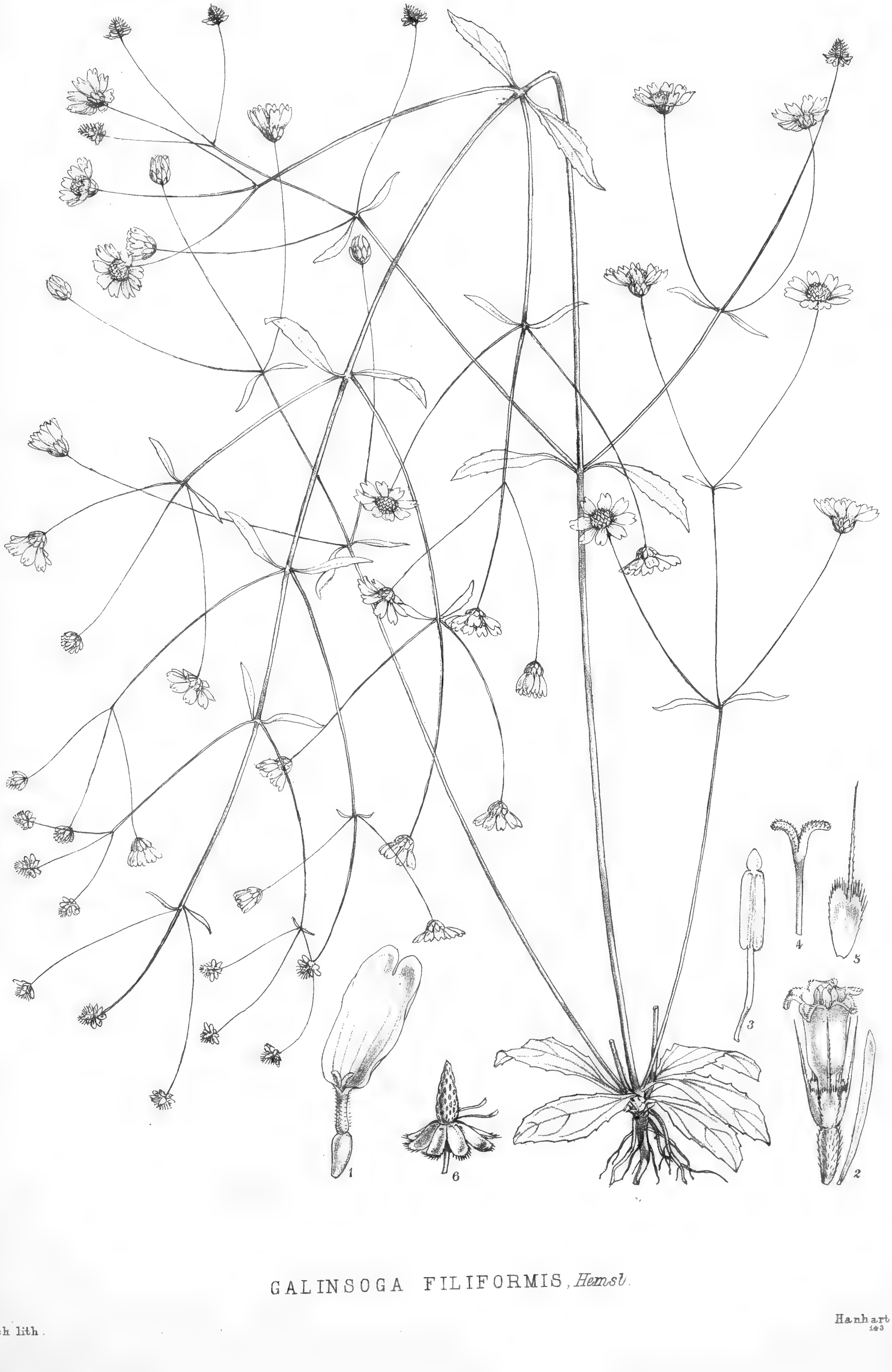
Hanhart imp.
275

VERBESINA FRASERI, *Hemsl.*

Mrs Salvin, Del.
W.H. Fitch lith.

Hanhart imp.

OTOPAPPUS ROBUSTUS, *Hemsl.*



GALINSOGA FILIFORMIS, *Hemsl.*

W.H.Fitch lith. Hanhart imp.

SENECIO CERVIARIÆFOLIUS, *Hemsl.*

W.H.Fitch lith.

Hanhart imp.

VACCINIUM BRACHYSTACHYUM, *Benth.*

C.O.Salvin del. Fitch lith.

Hanhart imp
117

A. 1–3 GAULTHERIA ODORATA, *H.B.K.*
B. 4–6 „ HIRTIFLORA, *Benth.*

C.O Salvin del. Fitch lith. Hanhart imp.
123

SYMPLOCOS COCCINEA, *Humb. et Bonpl.*

W.H.Fitch lith.

Hanhart imp.

PRESTONIA (*Hæmadictyon*) MACROCARPA, *Hemsl.*

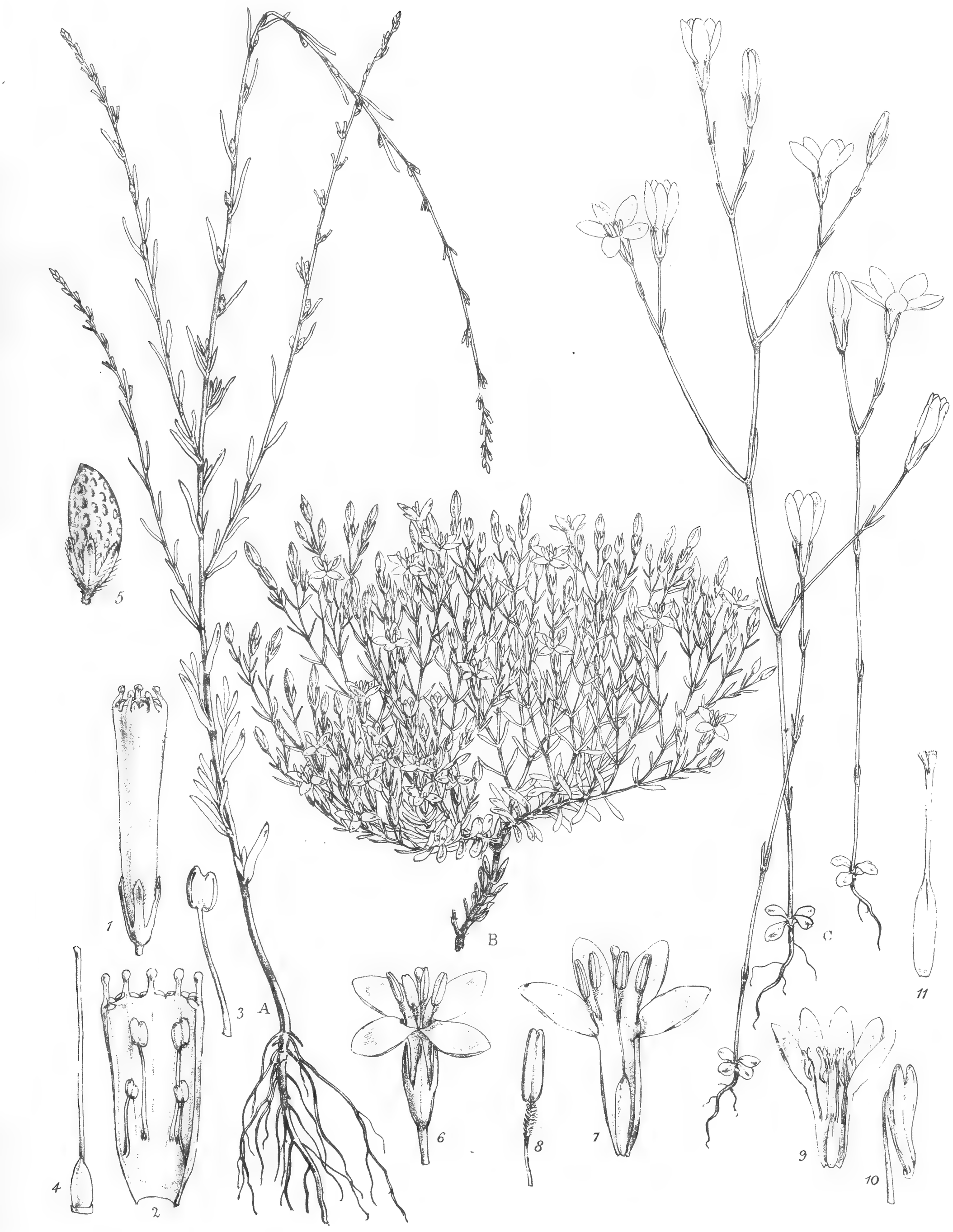
W.H.Fitch lith

Hanhart imp.
259

A. 1. 4. ASCLEPIAS ENPHORBIAFOLIA, *Engelm.*
B. 5. 6. GONOLOBUS PICTURATUS, *Hemsl.*

Mrs Salvin del.t Fitchlith.

Hanhart imp
257.



A. I 5. MICROSCHWENKIA GUATEMALENSIS, *Benth.*
B. 6 8. GENIOSTEMON SCHAFFNERI, *Engelm et Gray*
C. 9 11. ERYTHRÆA MADRENSIS. *Hemsl*

W.H Fitch lith.

Hanhart imp
258

Biol. Centr. Am

WIGANDIA KUNTHII, *Choisy.*

C.O.Salvin del. Fitch lith.

Hanhart imp.
106

BOURRERIA FORMOSA, *Hemsl.*

Biol. Centr. Am.

IPOMÆA (§QUAMOCLIT) LUTEA, *Hemsl*

W.H.Fitch lith.

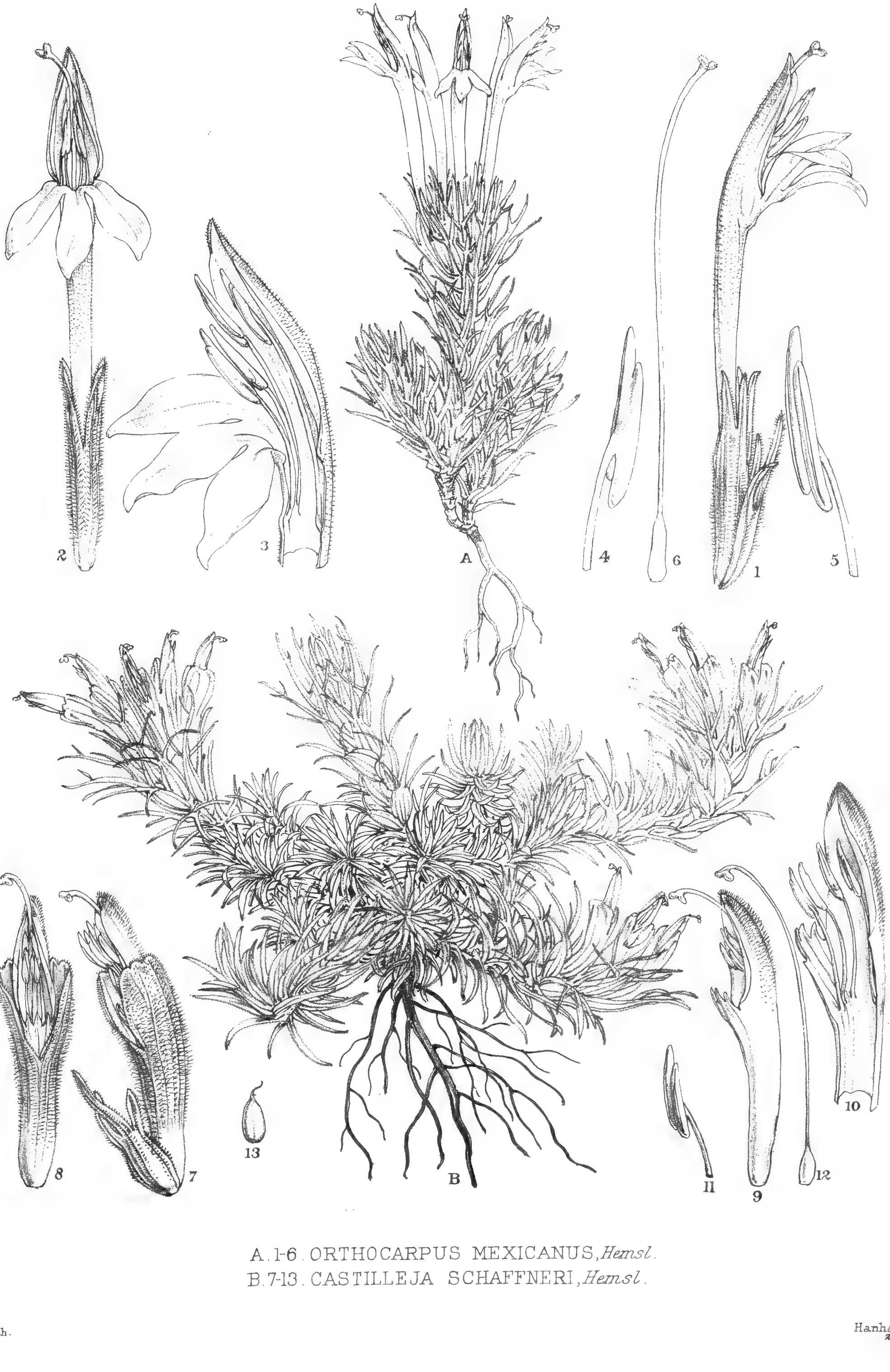
Hanhart imp.

IPOMÆA MURUCOIDES, *R. et S.*

ESCOBEDIA LINEARIS, *Schlecht.*

C.O.Salvin del. Fitch lith.

Hanhart imp.
101



A. 1-6. ORTHOCARPUS MEXICANUS, *Hemsl.*
B. 7-13. CASTILLEJA SCHAFFNERI, *Hemsl.*

W.H.Fitch lith.

Hanhart imp
280

UROSKINNERA HIRTIFLORA, *Hemsl.*

GODMANIA MACROCARPA, *Hemsl.*

W.H.Fitch del. et lith. Hanhart imp

RUELLIA BOURGÆI, *Hemsl.*

C.O.Salvin del. Fitch lith.

Hanhart imp
107

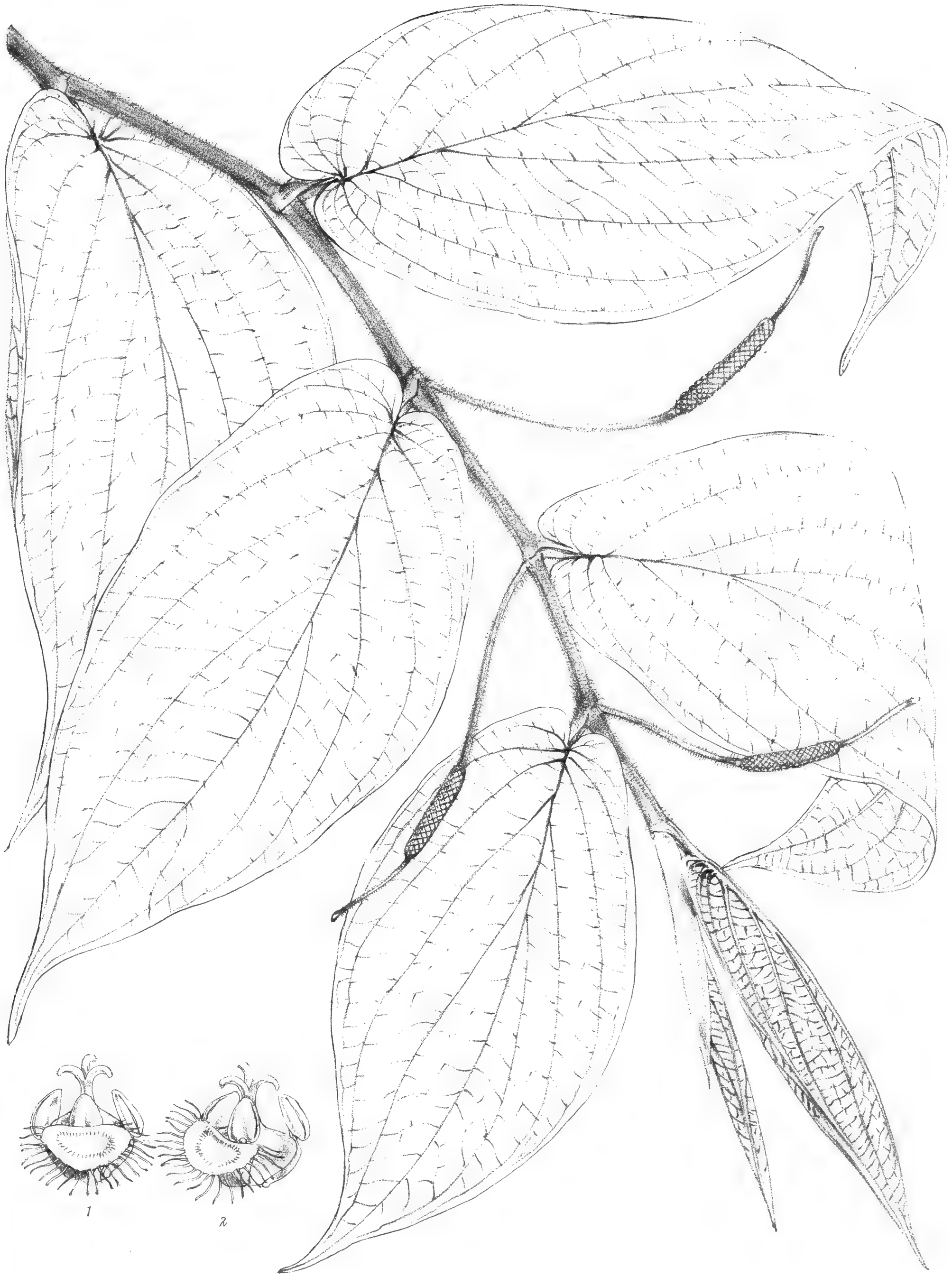
1_5 CHILERANTHEMUM TRIFIDUM, *Œrst.*
6_14 GLOCKERIA GRACILIS, *Nees.*

JACOBINIA AUREA, *Hemsl.*

A I 5. GARDOQUIA MICROMERIOIDES, *Hemsl.*
B. 6. 9. HEDEOMA PALMERI, *Hemsl.*

SELINOCARPUS PALMERI, *Hemsl.*

AGDESTIS CLEMATIDEA *Moç et Sessé.*

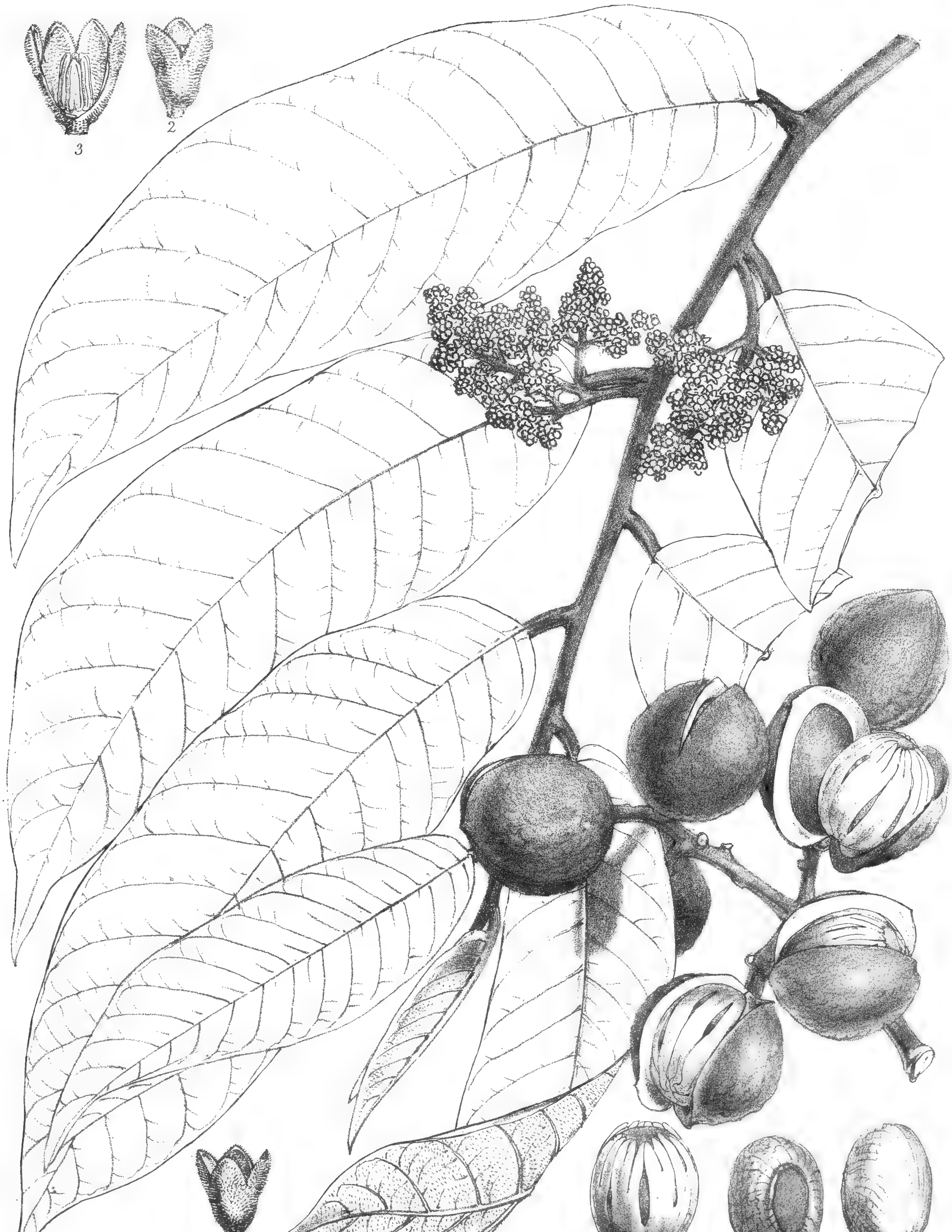


PIPER UROSTACHYUM, *Hemsl.*

MYRISTICA MEXICANA, *Hemsl.*

W.H Fitch lith.

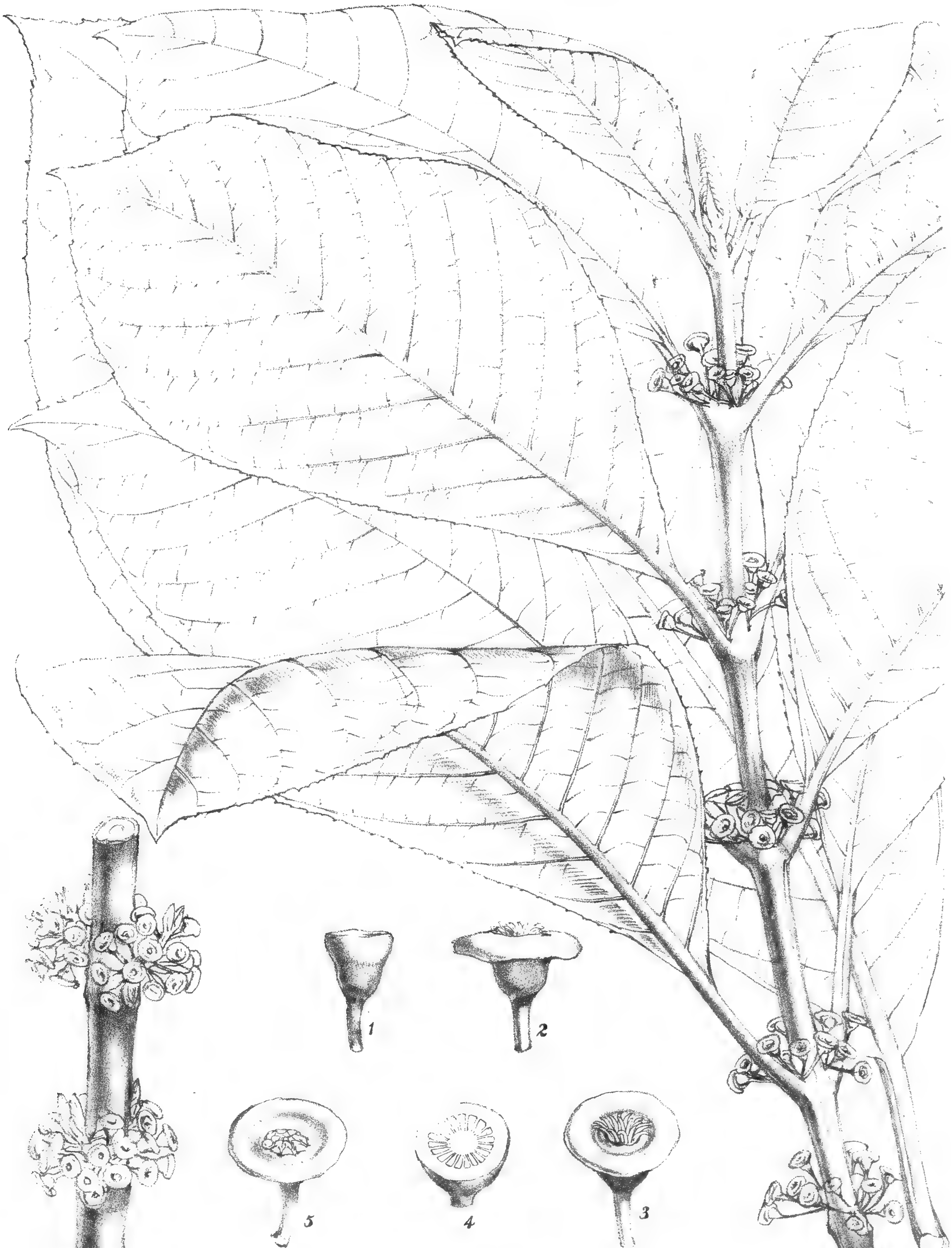
Hanhart imp
260



1–4. MYRISTICA PANAMENSIS, *Hemsl.*
5, 6. „ GUATEMALENSIS, *Hemsl.*

W.H.Fitch lith.

Hanhart imp
262



SIPARUNA CAULIFLORA, *Hemsl.*

W H Fitch lith. Hanhart imp.

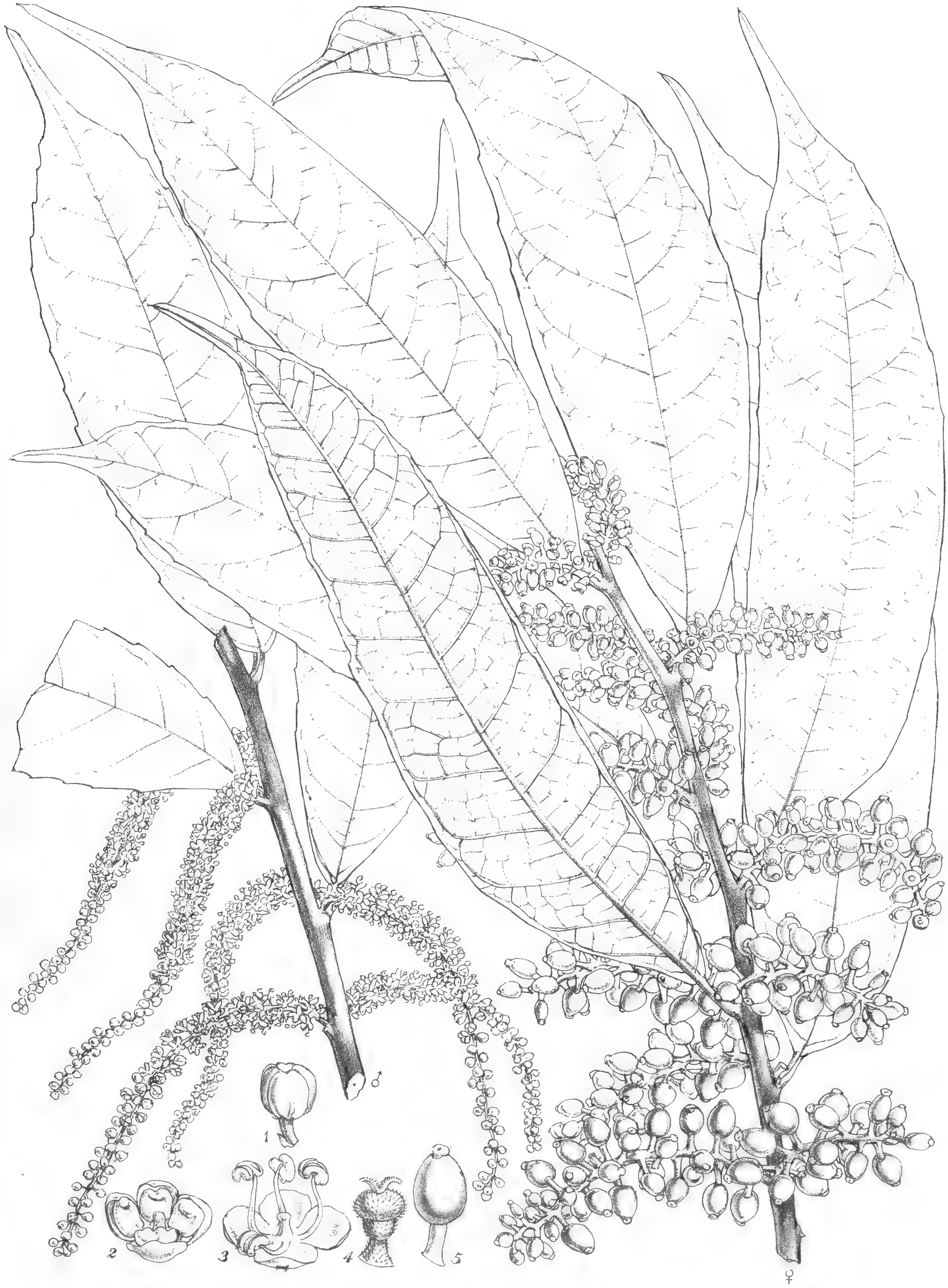
ROUPALA BOREALIS, *Hemsl*

CELTIS MONOICA, *Hemsl*

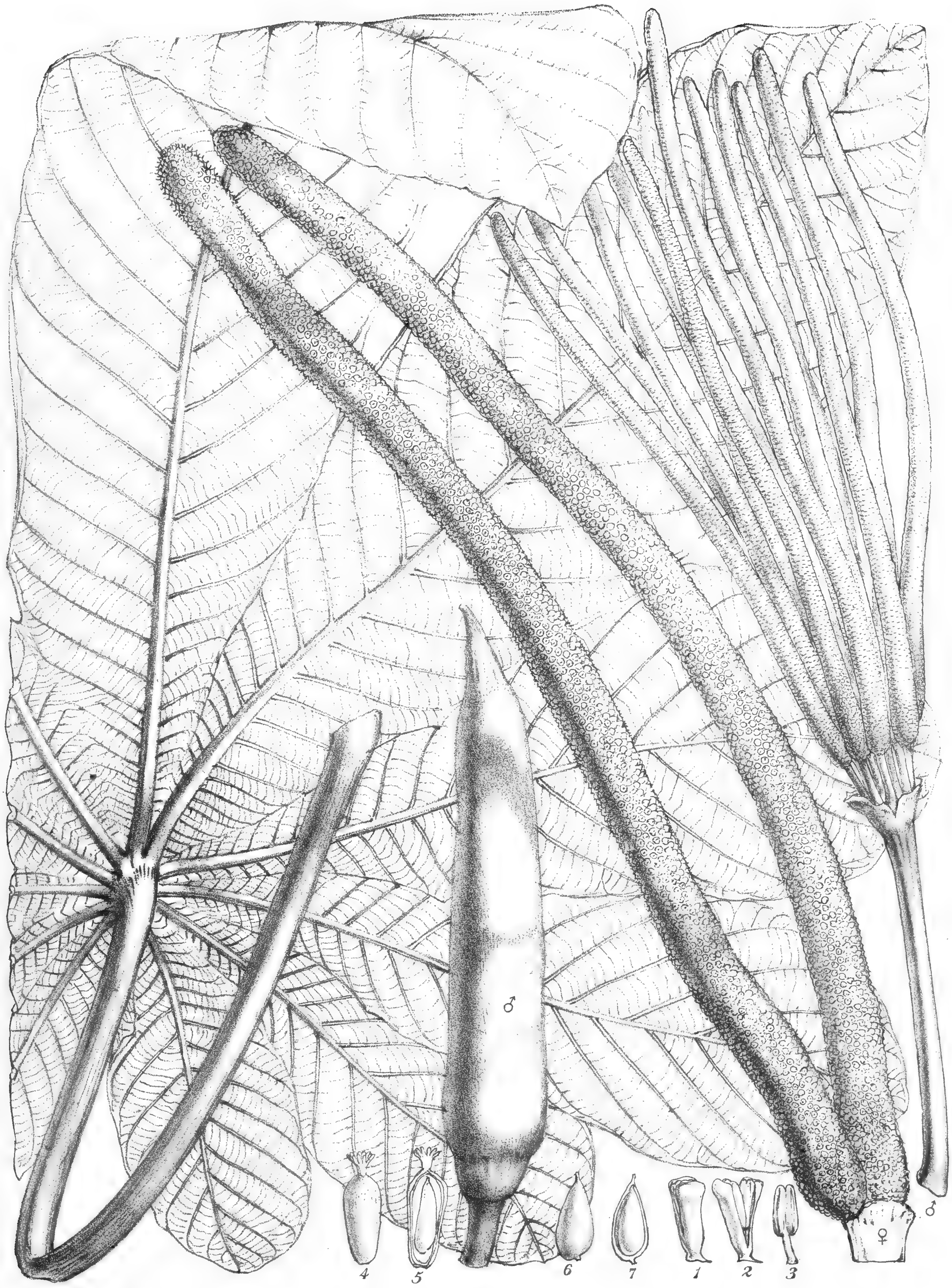
TROPHIS MEXICANA, *Bureau*

W.H. Fitch lith.

Hanhart imp
253

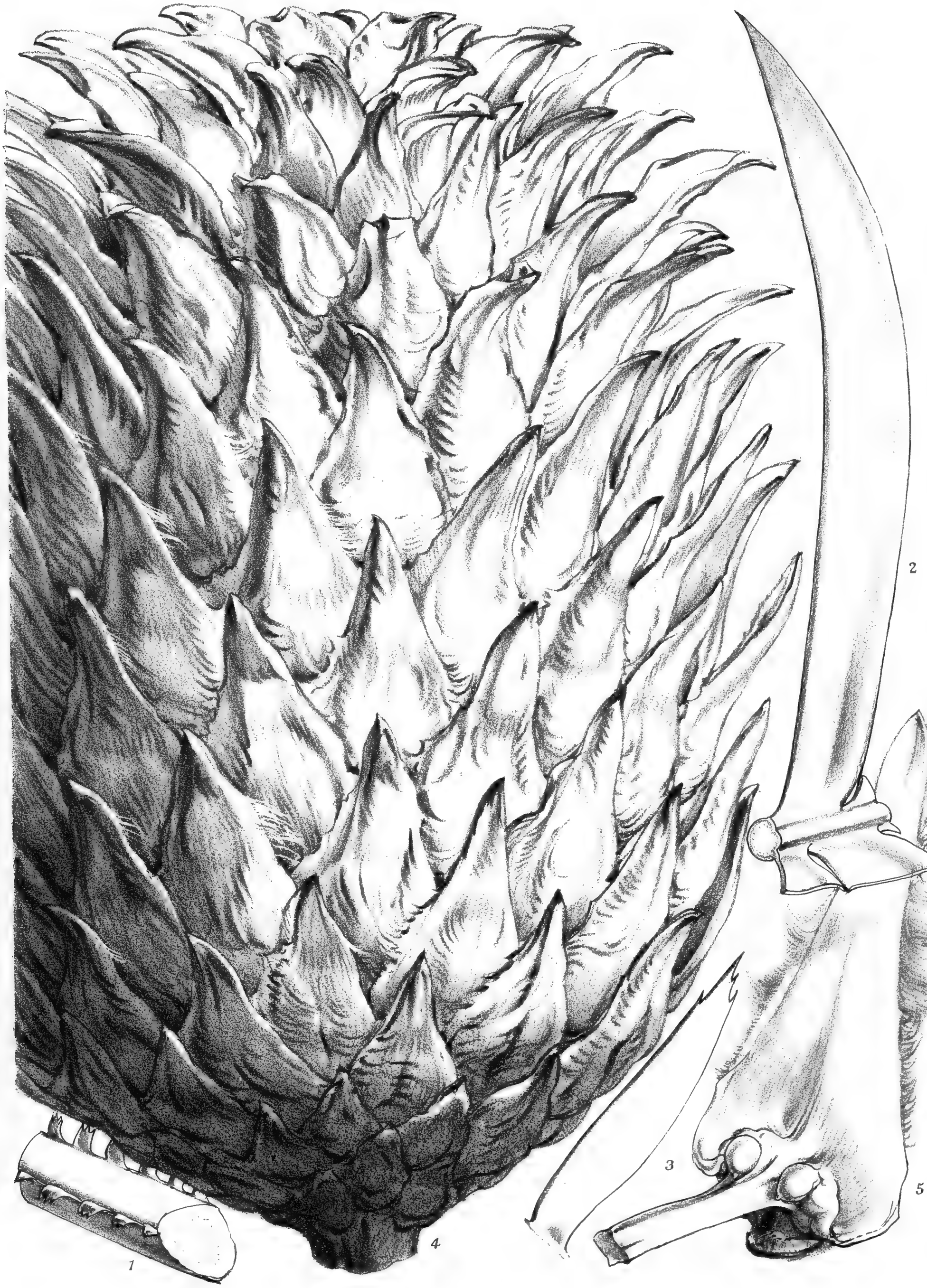


SOROCEA AFFINIS, *Hemsl.*



CECROPIA MEXICANA, *Hemsl.*

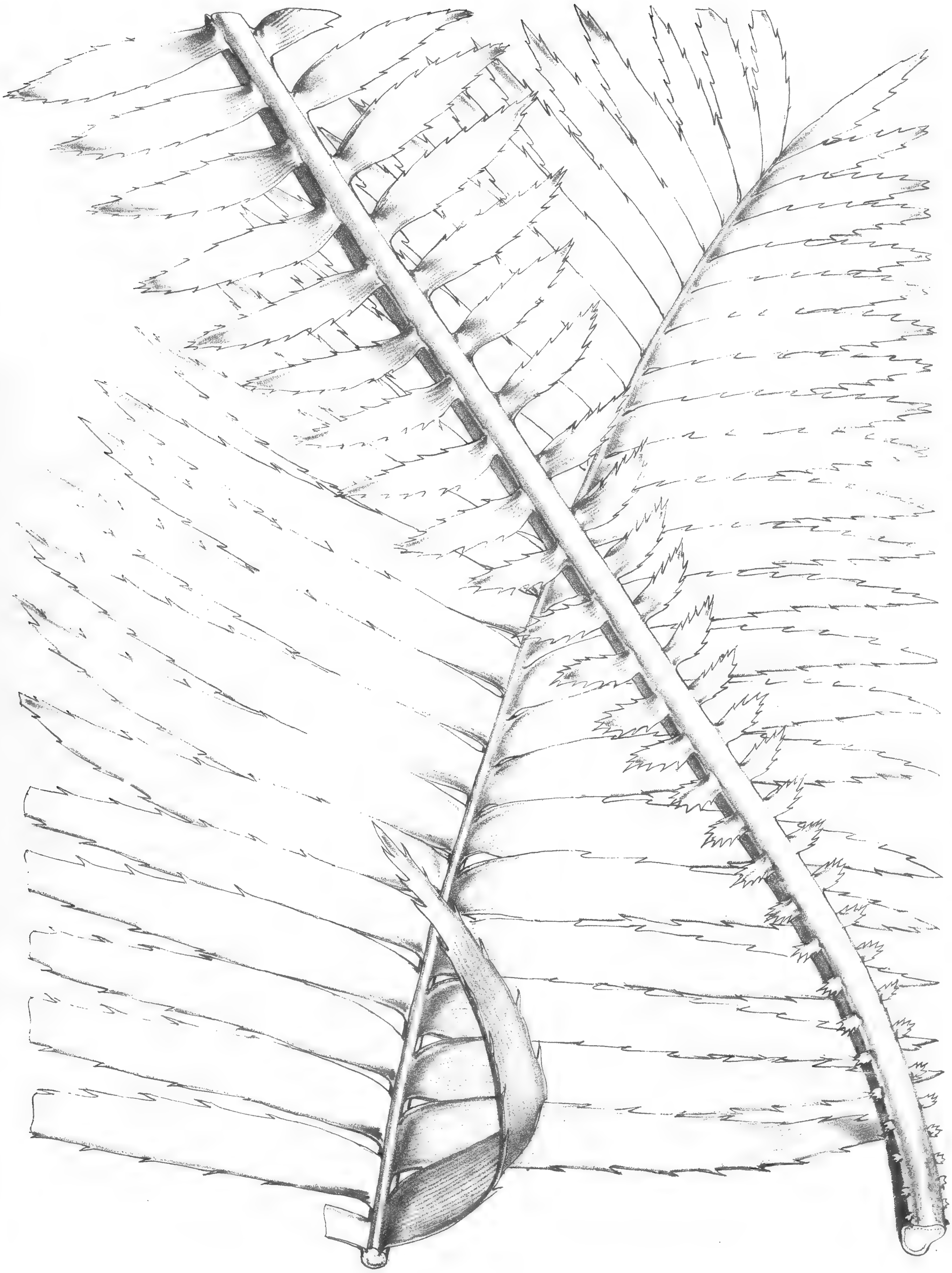
W.H.Fitch lith. Hanhart imp.
251



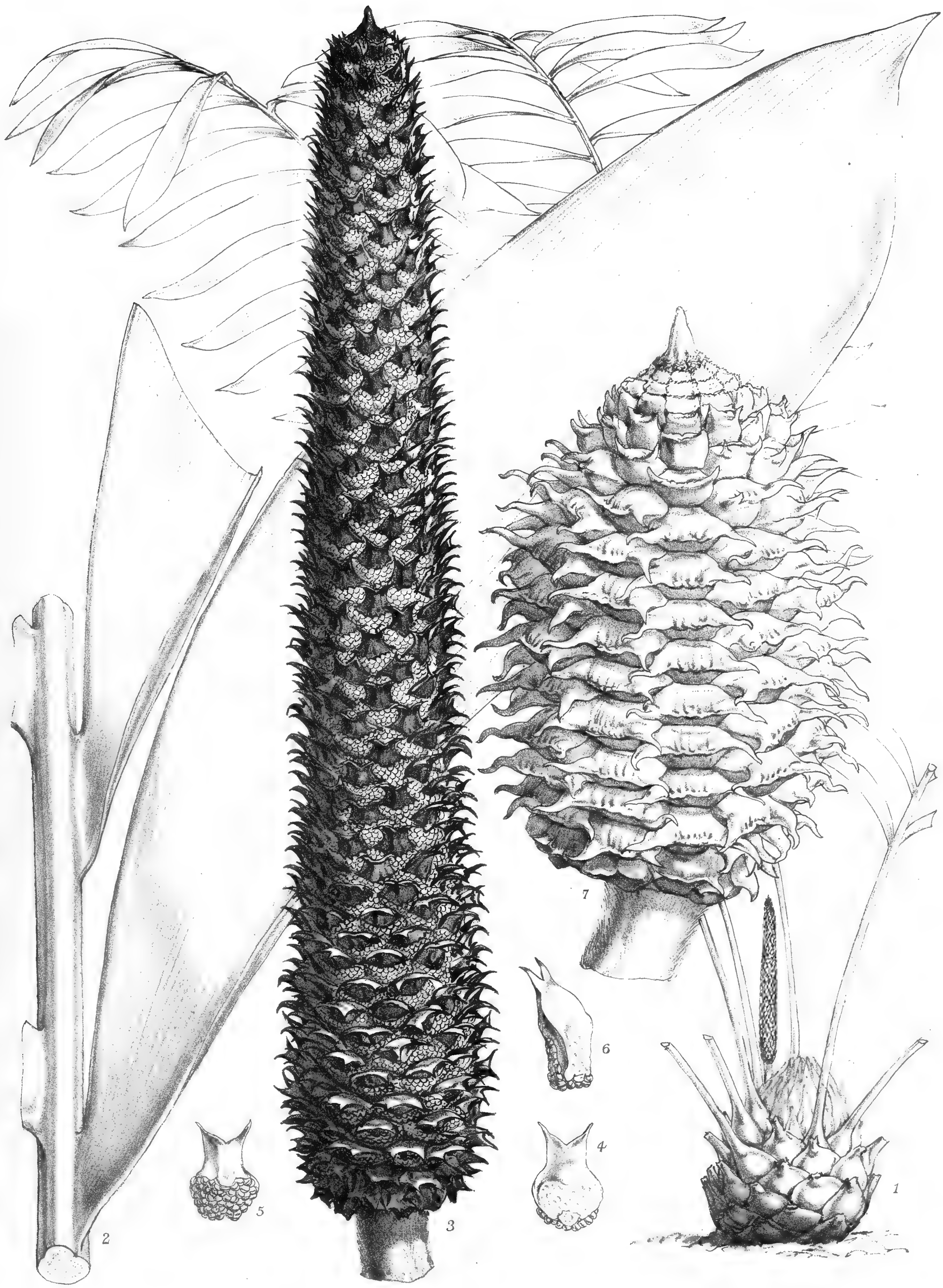
DIOON EDULE, *Lindl.* (1&2)
DIOON EDULE, *var.* LATIPINNA .(3-5)

W.H.Fitch lith.

Hanhart imp
328.



DIOON SPINULOSUM, *Dyer*.



CERATOZAMIA MIQUELIANA, *Wendl.*

W.H. Fitch lith.

Hanhart imp.

ZAMIA LAWSONIANA, *Dyer*.

W.H.Fitch lith. Hanhart imp.
330.

PITCAIRNIA OCHROLEUCA, *Baker.*

BRAVOA SESSILIFLORA, *Hemsl.*

W.H.Fitch lith. Hanhart imp. 168

AGAVE GUTTATA, *Jacobi et Bouché.*

W.H.Fitch lith. Hanhart imp. 226

A. AGAVE (SEUAGAVE) MEGALACANTHA, *Hemsl.*
B. „ (SMANFREDA) SESSILIFLORA, *Hemsl.*

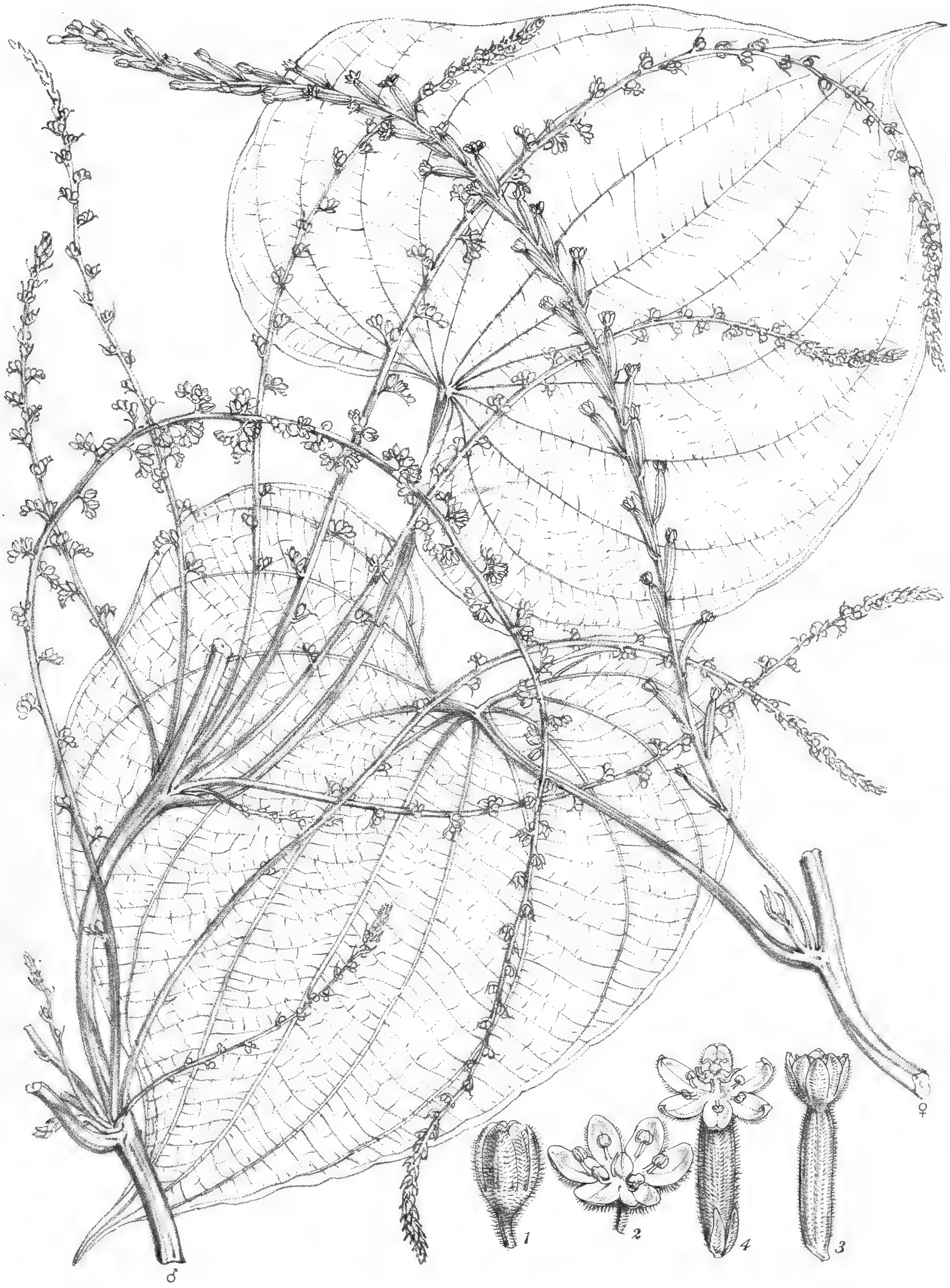
W.H.Fitch del. et lith.

Hanhart imp
176

DIOSCOREA CONVOLVULACEA, *Schl.*

W.H.Fitch lith.

Hanhart imp.
212.



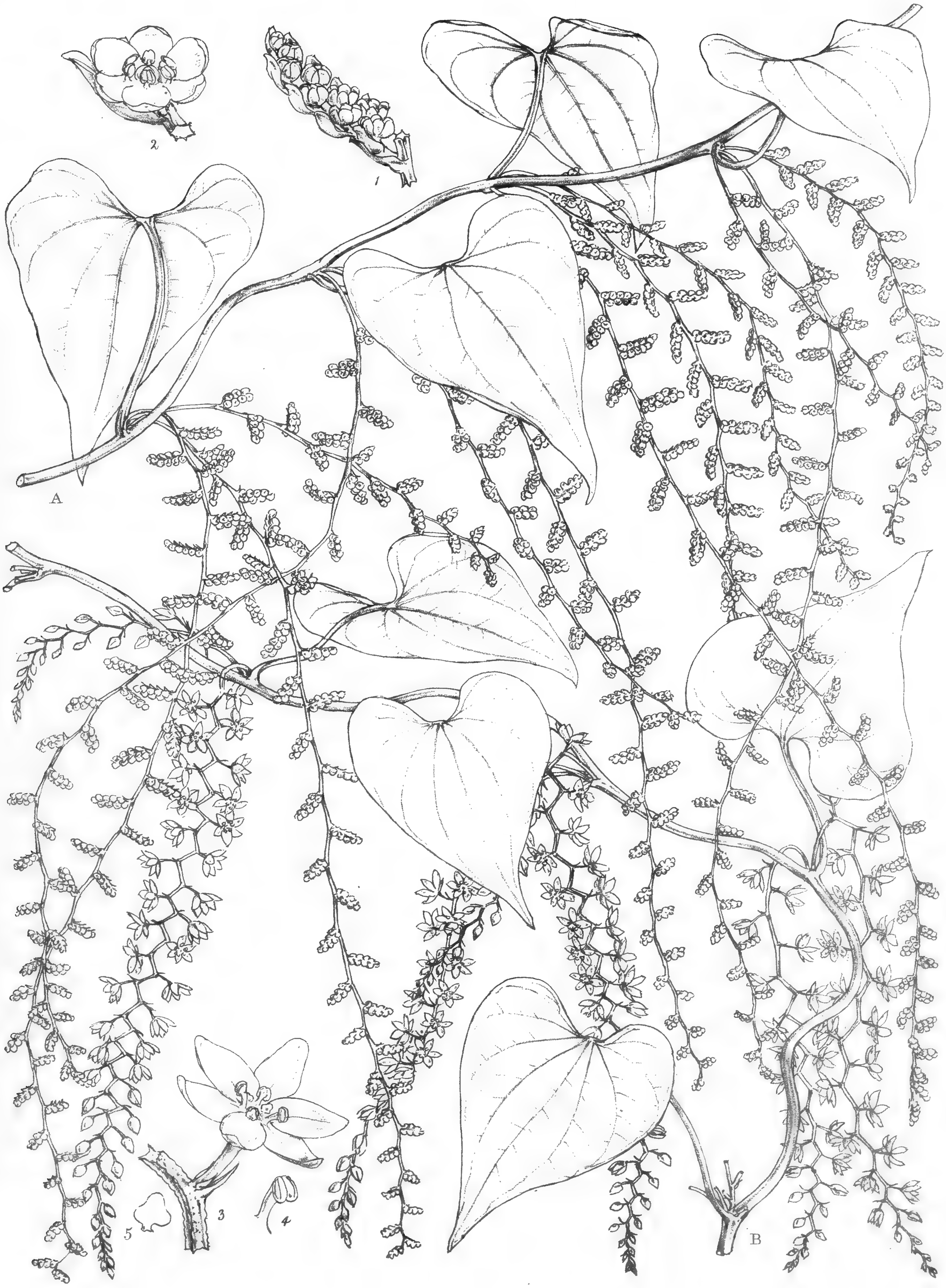
DIOSCOREA CYMOSULA, *Hemsl.*

W.H.Fitch lith. Hanhart imp.
279

DIOSCOREA SAPINDOIDES, *Presl.*

W.H.Fitch lith.

Hanhart imp.
277



A. 1, 2. DIOSCOREA SPICULIFLORA, *Hemsl.*
B. 3, 4. " PALLENS, *Schl.*

W.H. Fitch lith.

Hanhart. imp.
352

NOLINA HUMILIS, *S. Wats.*

W. H. Fitch lith.

Hanhart. imp.
220.

NOLINA WATSONI, *Hemsl.*

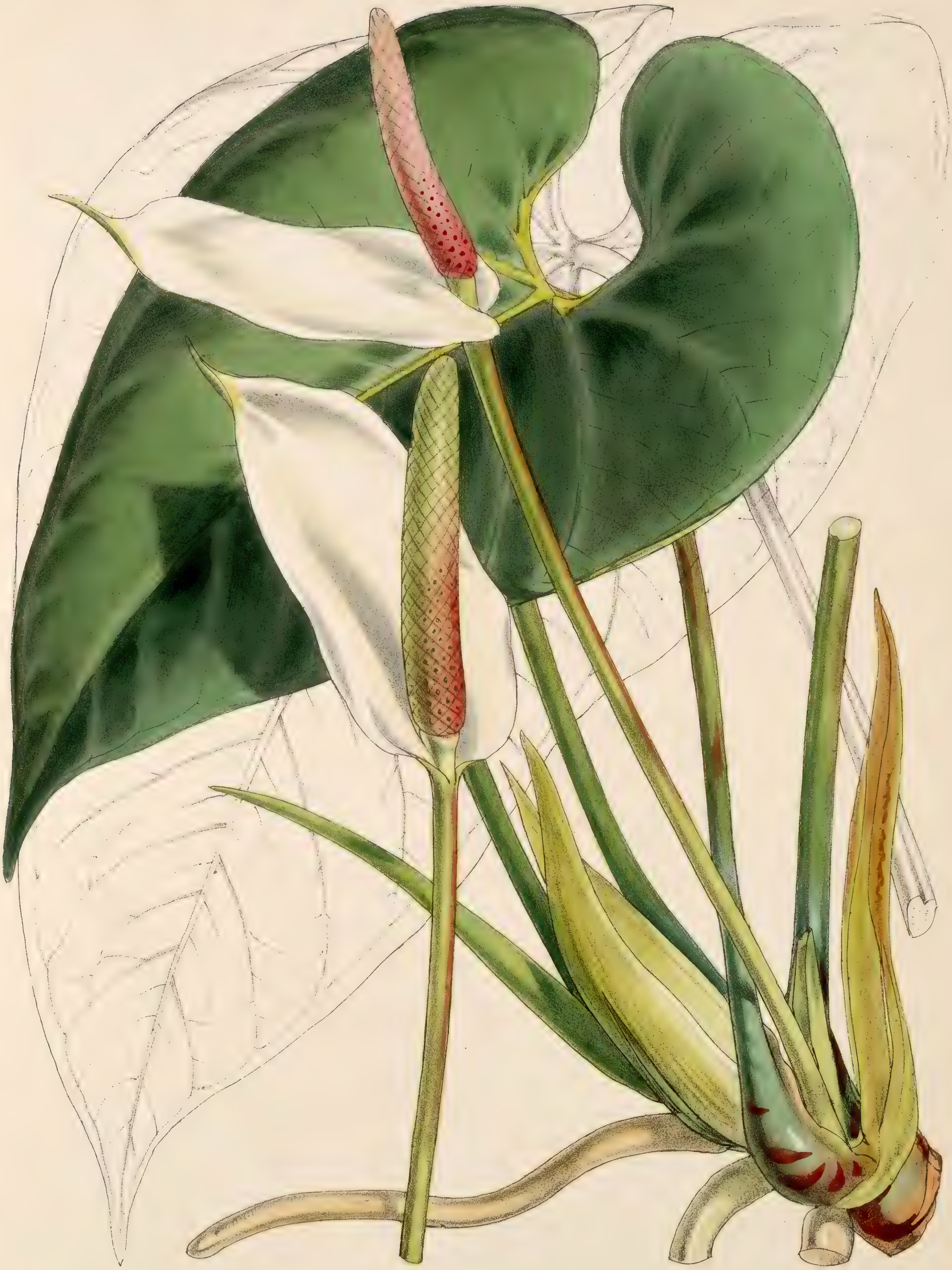
W.H.Fitch lith. Hanhart imp.

1_11 PHŒOSPHERION LEIOCARPUM, *Hassk.*
12_21 CALLISIA INSIGNIS, *C.B.Clarke.*

1_11 LEPTORHÆO FILIFORMIS, *C.B.Clarke.*
12_18 TRADESCANTIA COMMELINOIDES, *R.et S.*

W.H.Fitch del. et lith.

Hanhart imp.
162



ANTHURIUM FRATERNUM, *Schott.*

C.O. Salvin del. Fitch lith. Hanhart imp

ANTHURIUM MONTANUM, *Hemsl.*

C.O.Salvin del. Fitch lith. Hanhart imp. 118

ANTHURIUM SALVINIÆ, *Hemsl.*

PHILODENDRON AFFINE, *Hemsl.*

C.O.Salvin del. Fitch lith

Hanhart imp.
105

SCLEROPOGON BREVIFOLIUS, *Philippi*.

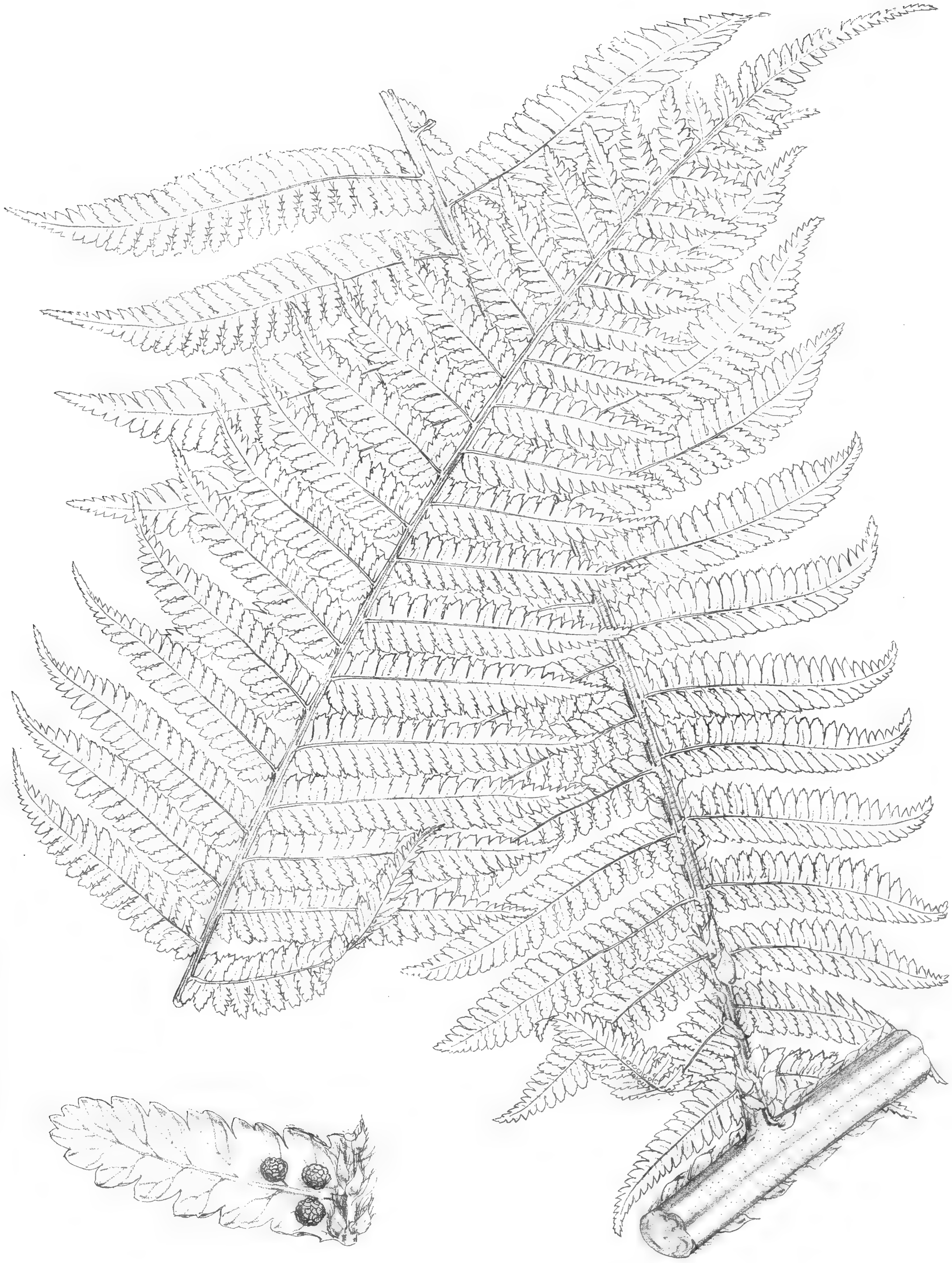
WHFitch del. et lith.

Hanhart imp
178

A. 1 4. ZEUGITES MUNROANA, *Hemsl.*
B. 5 8. FESTUCA LIVIDA, *Willd.*

W Fitch lith.

Hanhart imp
252

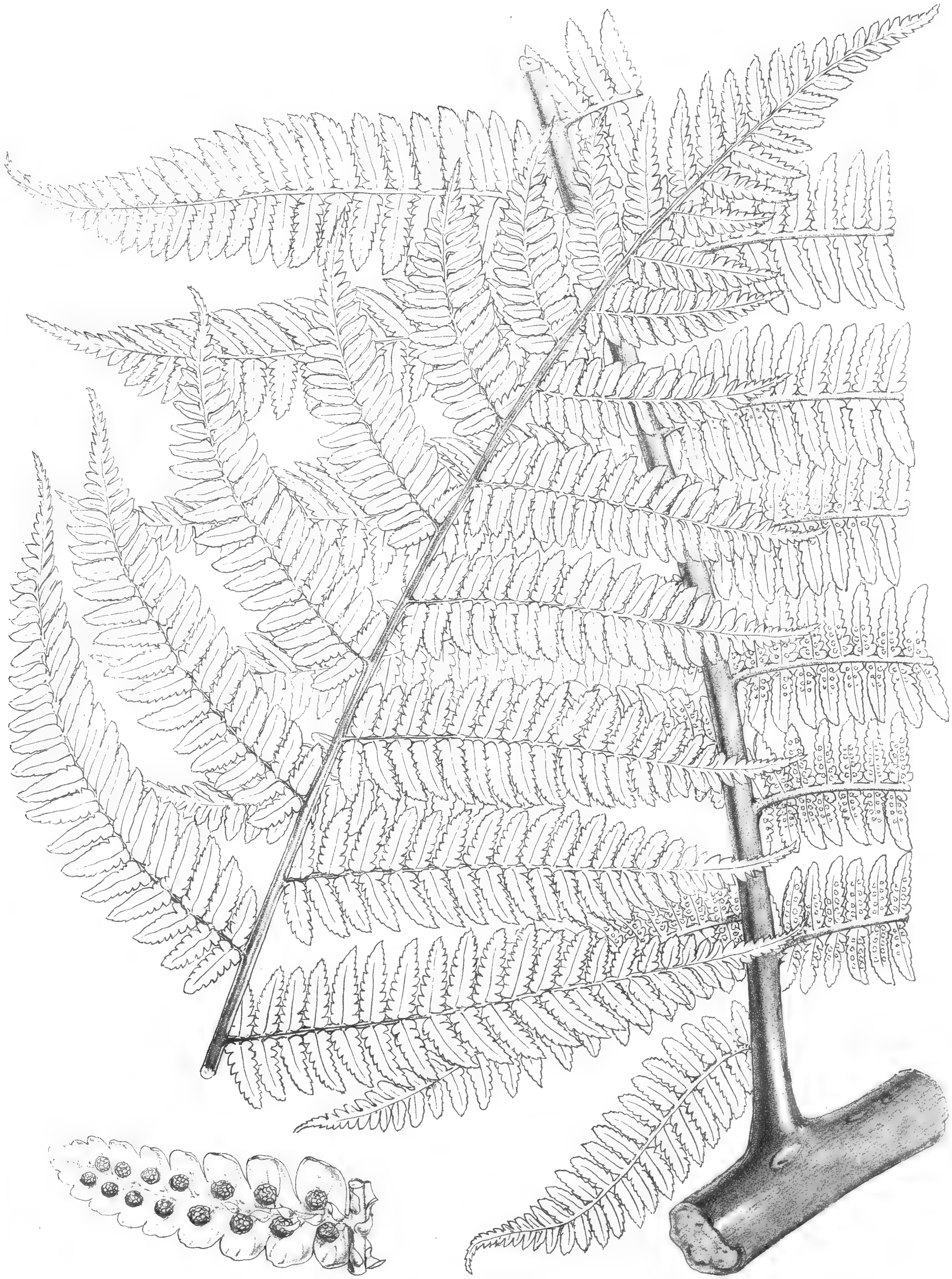


ALSOPHILA GODMANI, *Hook.*

W.H.Fitch del.et lith.

M&N.Hanhart imp.
172

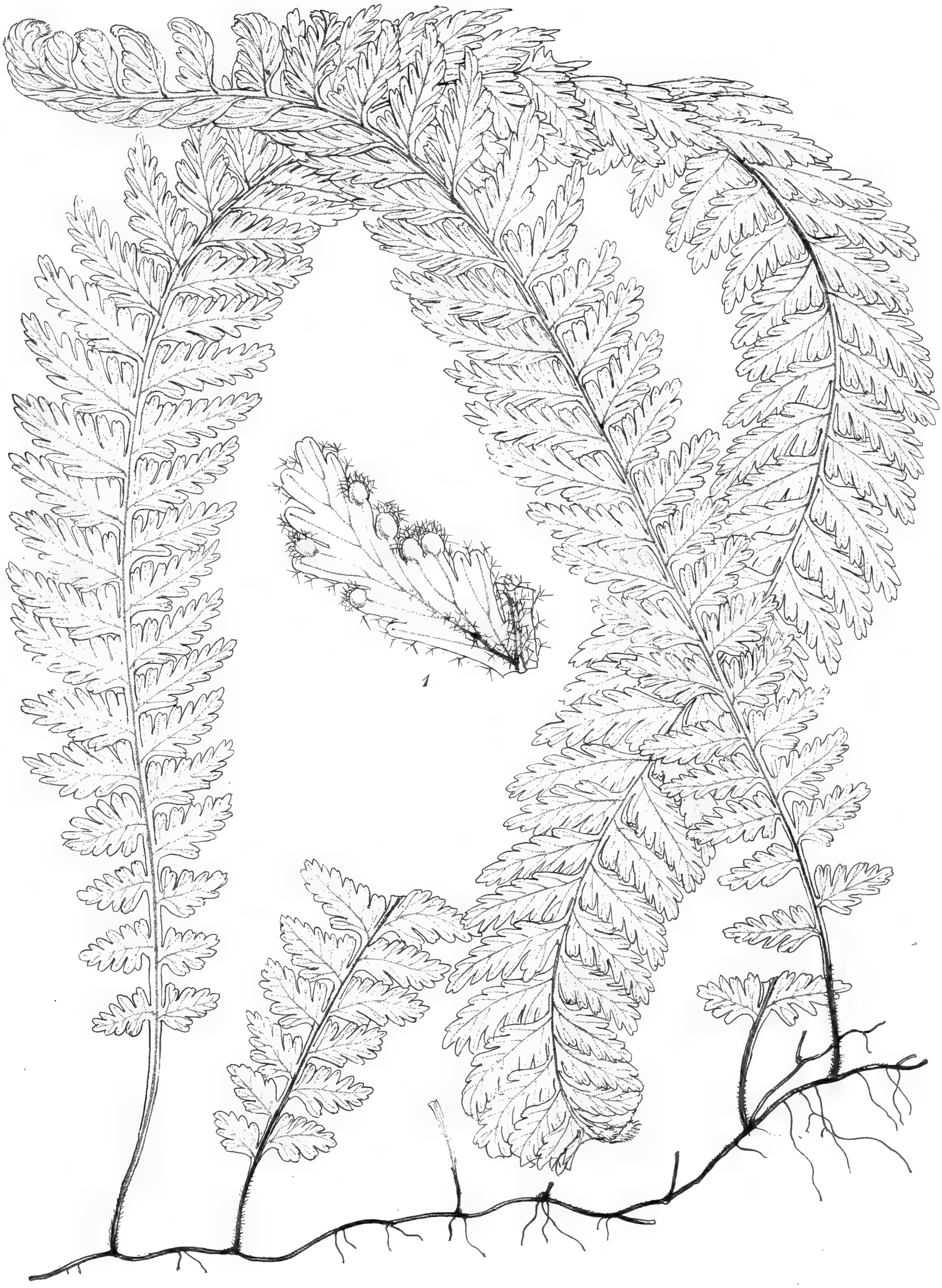
Biol. Centr. Am.



ALSOPHILA SALVINII, *Hook.*

W.H.Fitch del. et lith.

Hanhart imp
179



HYMENOPHYLLUM CILIATUM, *Sw. Var.* SPLENDIDUM, *Baker.*

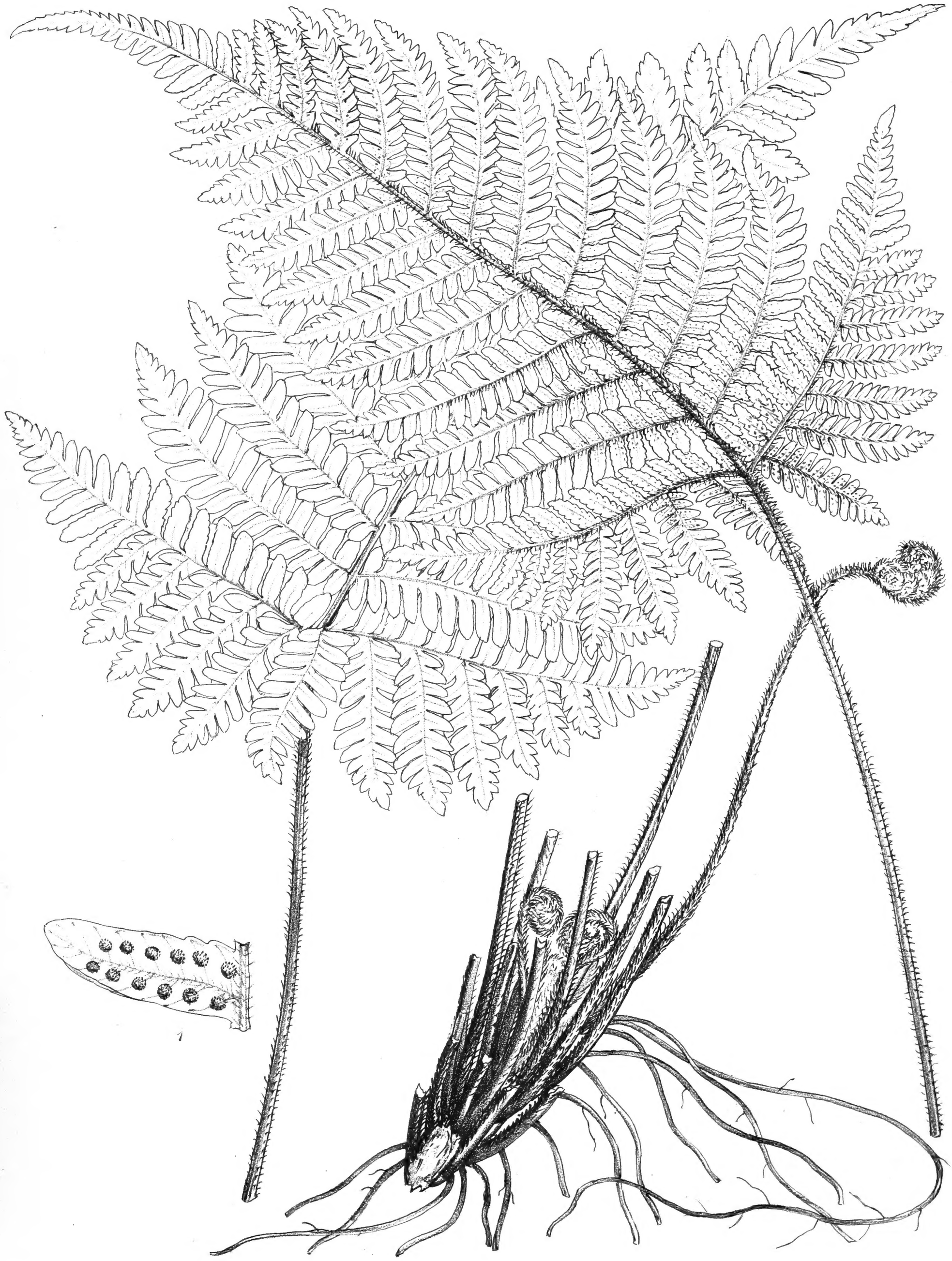
W.H.Fitch.lith.

Hanhart imp.
309.

A. 1. TRICHOMANES GODMANI, *Hook.*
B. 2. 3. CHEILANTHES AUREA, *Baker.*

W. H. Fitch lith.
Hanhart imp
310

ADIANTUM (HEWARDIA) DOLOSUM, *Kunze, Var.* WILSONI, *Baker.*



POLYPODIUM (PHEGOPTERIS) HEMSLEYANUM, *Baker*.

W.H.Fitch lith. Hanhart imp 312.

A. 1-3. SELAGINELLA NICARAGUENSIS, *Baker.*
B. 4-7. „ GUATEMALENSIS, *Baker.*

W.H.Fitch lith.

Hanhart imp
364

Biol. Centr. Am.

115 110 105 100 95 90 85 80 75

30 25 20 15 10

SOUTH ARIZONA
NEW MEXICO
TEXAS
Lennoacea
Fouquieria
Mimosea
Rio Grande
LOWER CALIFORNIA
SONORA
CHIHUAHUA
COAHUILA
Agave, Yucca & Cactus type
Sierra Madre
SINALOA
NORTH MEXICO
Matamoros
GULF OF MEXICO
FLORIDA
Durango
about North limit of Phanerogamic epiphytes
Tropic of Cancer
Mazatlan
North Limit of Cocoa-nut Palm
Tres Marias Is.
Zacatecas
San Luis Potosi
Tampico
San Blas
JALISCO
Guadalaxara
Guanaxuato
Oaks to coast
CUBA
I. of Pines
YUCATAN
Cozumel I.
Revillagigedo Is.
Colima 12,750
Morelia
North limit of Marcgraviaceæ
Mexico
SOUTH MEXICO
Vera Cruz
Cofre de Perote 13,420
Popocatapetl 17,784
Cordova
Orizaba 17,879
TABASCO
Pines to coast
Sempoaltepec 13100
CHIAPAS
San Cristobal 6500
Acapulco
Oaxaca
Ruatan I.
British Honduras
GUATEMALA
North limit of Vochysiaceae
HONDURAS
Fuego 13,100
Agua 12,450
SALVADOR
South limit of Pines
NICARAGUA
G. of Fonseca
Tiejo 6256
COSTA RICA
Irazu 11,500
Chagres
PANAMA
Panama
Chiriqui 11265
Veragua
Coiba I.
Cocos I.
PACIFIC OCEAN

110 105 Longitude West 100 of Greenwich 95 90 85 80

Edwd Weller lith.

Botany, Tab. 110.